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THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

NOVEMBER 12, 1951



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THE WINE RAILWAY APPLIANCE CO.

TOLEDO 9, OHIO

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Increased supplies of iron and steel scrap must be received promptly if the needs of our vast defense program are to be met. The railroads can help meet this need by searching out every last pound of iron and steel scrap—and moving it *fast*, as only the railroads can, to America's steel mills.

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*This message is made in behalf of*  
THE TRANSPORTATION COMMITTEE FOR SCRAP RECOVERY  
OFFICE OF DEFENSE MOBILIZATION

**BUFFALO BRAKE BEAM CO.  
UNIT TRUCK CORPORATION**







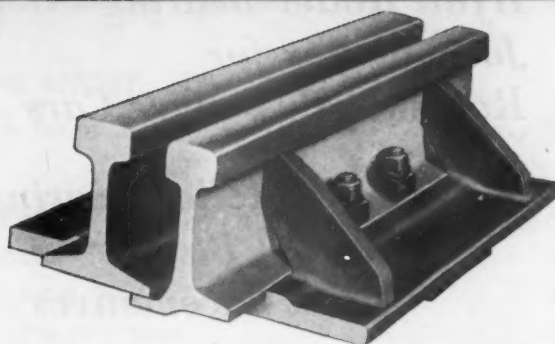
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*Here's a Guard Rail  
that can't overturn*

Ever studied a Bethlehem Hook-Flange Guard Rail at close range? If not, let us tell you why it can't—*can't*—overturn, no matter how much of a wallop it takes.

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Section of Model 751 Hook-Flange Guard Rail. Note how the special flange dips under the running rail. Note, too, the heavy welded side braces.

which helps keep guard and running rail properly aligned.

Care for more details? A Bethlehem man will be glad to supply them and show you some installations. That's the place to examine these guard rails—out on the job where they're actually in service.

**BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.**

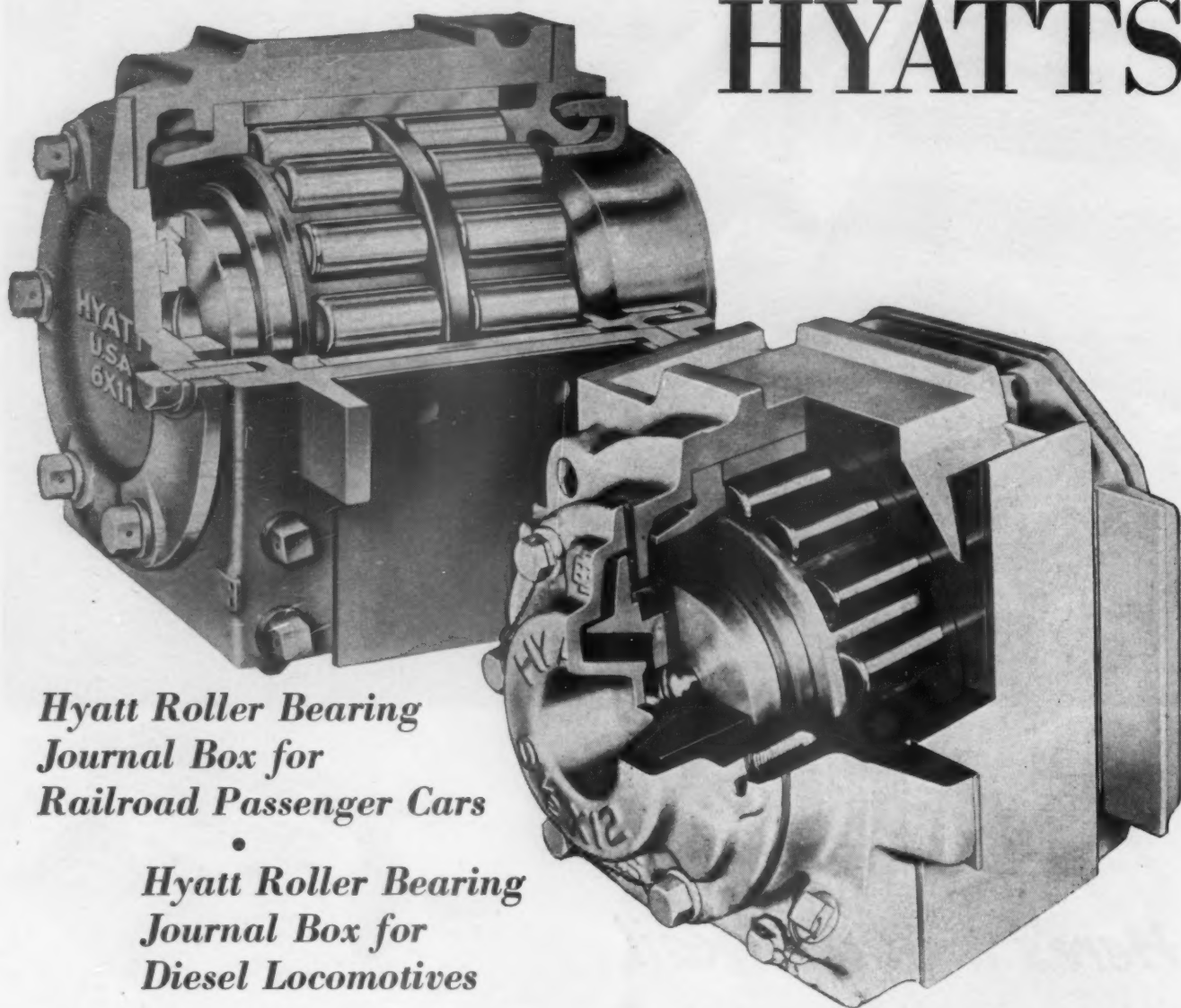
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# It's easier with

# HYATTS



*Hyatt Roller Bearing  
Journal Box for  
Railroad Passenger Cars*

*Hyatt Roller Bearing  
Journal Box for  
Diesel Locomotives*

Rugged construction, simple, easy-to-assemble parts, combined with high capacity straight radial bearings, make Hyatt Journal Boxes definitely easier to maintain.

They are constructed so that the housing and roller assembly can be removed from the car journal as a unit. This is done easily and quickly without special tools, leaving only the Hyatt inner race and water guard on the car journal. All Hyatt roller assembly and housing combinations of the same size and type are freely interchangeable on axles having Hyatt inner races and water guards mounted.

Spare journal box inventories can be reduced

since protective wheel sets need only be equipped with inner races and water guards instead of complete journal boxes.

★ ★ ★

The boxes and bearings are easier to clean and inspect because all parts are readily accessible. Wheel lathe work is simplified since wheels can be turned on collets instead of centers thus permitting deeper, faster cuts. Hyatts make maintenance work easier all around. When you consider journal boxes for new or changeover equipment, remember—"It's Easier With Hyatts." Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

## HYATT ROLLER BEARING JOURNAL BOXES



# RAILWAY AGE

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.



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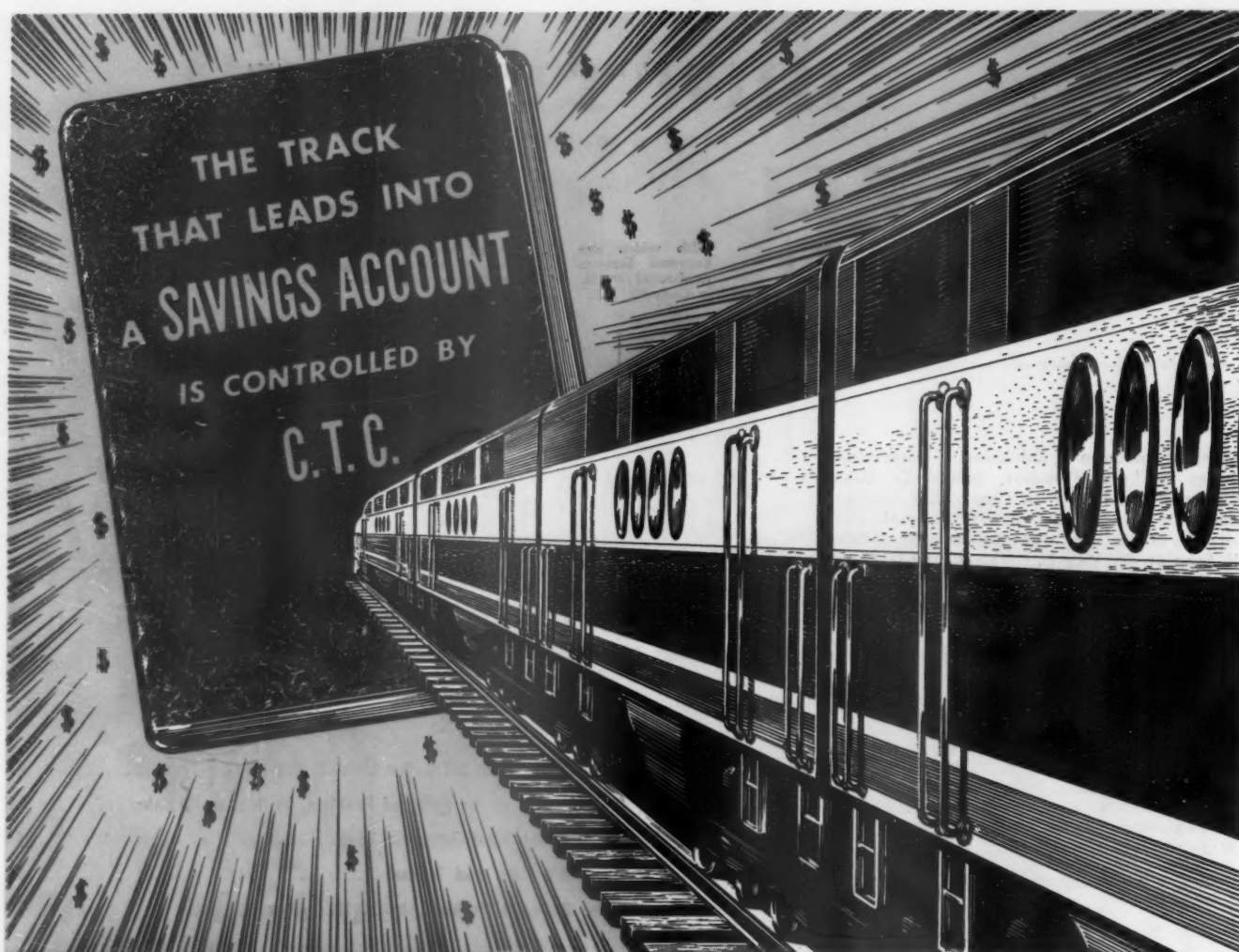
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# **UNION SWITCH & SIGNAL**

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE  PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

**Here's an example of  
"UNION" C.T.C.  
saving \$115,110.00 annually\***

## ***This is what happened***

- 1. Train stops and slow downs were reduced.**
- 2. Average road time per freight train was decreased 36 minutes eastward—59 minutes westward (52.7 miles of road—57.7 miles of track).**
- 3. Average speed of freight train was increased 2.8 m.p.h. eastward and 4 m.p.h. westward.**
- 4. Capacity of the line increased.**
- 5. Net saving in operating expenses is \$115,110.00.**

*\*Factual data will be supplied on request.*



## WEEK AT A GLANCE

### CURRENT RAILWAY STATISTICS

<b>Operating revenues, nine months</b>	
1951 .....	\$ 7,618,561,753
1950 .....	6,757,696,350
<b>Operating expenses, nine months</b>	
1951 .....	\$ 6,020,189,115
1950 .....	5,160,195,075
<b>Taxes, nine months</b>	
1951 .....	\$ 857,337,404
1950 .....	783,172,146
<b>Net railway operating income, nine months</b>	
1951 .....	\$ 589,700,770
1950 .....	680,351,673
<b>Net income, estimated, nine months</b>	
1951 .....	\$ 377,000,000
1950 .....	469,000,000
<b>Average price railroad stocks</b>	
November 5, 1951 .....	52.19
November 6, 1950 .....	46.86
<b>Car loading, revenue freight</b>	
43 weeks, 1951 .....	33,820,290
43 weeks, 1950 .....	32,030,816
<b>Average daily freight car surplus</b>	
Week ended November 3, 1951 ..	2,623
Week ended November 4, 1950 ..	4,304
<b>Average daily freight car shortage</b>	
Week ended November 3, 1951 ..	14,055
Week ended November 4, 1950 ..	32,639
<b>Freight cars delivered</b>	
September 1951 .....	8,533
September 1950 .....	5,131
<b>Freight cars on order</b>	
October 1, 1951 .....	140,135
October 1, 1950 .....	106,611
<b>Freight cars held for repairs</b>	
October 1, 1951 .....	97,176
October 1, 1950 .....	107,398
<b>Net ton-miles per serviceable car per day</b>	
August 1951 (preliminary) .....	1,074
August 1950 .....	1,093
<b>Average number railroad employees</b>	
Mid-September 1951 .....	1,286,469
Mid-September 1950 .....	1,283,514

### In This Issue . . .

**"WALL STREET" LOOKS AT RR PROBLEM:** Why are the public and institutional investors, whose collective opinion determines the credit standing of an industry, still afraid of railroad securities? Why is it so hard for the railroads to obtain capital after the physical rehabilitation, the reorganizations, and the comparatively heavy traffic of recent years? These questions were raised, and largely answered, by one of the country's foremost railroad security analysts in an address to the annual meeting of the Treasury Division of the A.A.R. The address is abstracted, together with Mr. Hahn's specific conclusions, on page 45, while the meeting itself is reported on page 54.

**BREAKING IN A NEW YARD:** The Canadian Pacific's experiences in breaking in its big new St. Luc yard at Montreal are outlined on pages 48 and 49, in an article which is of special interest because it tells the "bugs" encountered, as well as the remedies therefor.

**WHO NEEDS SELLING?** The people in whose power it lies to solve the railroad problem are numbered not in the millions, but in the thousands, and they fit into seven specific groups. What these groups are and why it is necessary to "sell" them on the railroad problem — with service as a major sales weapon — is outlined in this issue's leading editorial, on page 39.

**EFFICIENT SALVAGE:** How the Southern used specially developed equipment to remove ties and ballast from 66 miles of second main track at low cost, is told in detail, with pictures of the equipment devised, on page 50.

### In Washington . . .

**"INADVERTENCE":** Still determined to prevent railroad trucking affiliates from engaging in any "all-motor" freight business, the I.C.C. has added "the usual conditions" to a number of certificates originally issued unconditionally to the Frisco Transportation Company, a subsidiary of the St. Louis-San Francisco. The commission, it seems, has discovered that the original certificates were "inadvertently" issued without the conditions which the commission now seeks to attach to them. It's really rather appalling to speculate on how far this doctrine of "inadvertence" might spread in bureaucratic circles, and what some of its results might be. Or will taxpayers be justified in "inadvertently" omitting items from income tax returns?



## WEEK AT A GLANCE



"THE ACTION of the [Interstate Commerce] Commission, which has held the railroads down to an inadequate rate level designed to produce anything but a fair return on their investment, can have only the effect of preventing the railroads from achieving that degree of financial soundness which would permit plant expansion and improvement to the extent called for by the national welfare and contemplated in the Defense Production Act." The address of which that emphatic quotation was a part was delivered by J. M. Symes, vice-president — operation of the Pennsylvania (above), at St. Louis last Tuesday evening. It is abstracted on pages 56 and 57.

**NET DOWN AGAIN:** Nine-months net income of Class I railroads was down nearly \$100 million, or almost 20 per cent, from net income reported for the corresponding period of 1950, according to figures just released by the A.A.R. and summarized in the news pages. For September alone, net was down from \$101 million in 1950 to \$50 million this year; while September gross revenues declined by 1.8 per cent, in spite of higher Ex Parte 175 rates, September operating expenses increased by 9.9 per cent.

## ... And Elsewhere

**HIGHER TRUCK RATES?** There are strong indications that the truckers will be asking six to ten per cent more for their services before the end of the year. The Eastern Central Motor Carriers Association is reportedly planning a nine per cent boost; Central States Motor Freight Bureau lines are seeking a ten per cent boost, to be effective about the same time; the Pacific Inland Tariff Bureau's figure is said to be six per cent; the Middlewest Motor Freight Bureau's the same; and a like boost for southern truckers is in the works.

**MUST BE A GOOD PLACE TO WORK!** It may not be a record—although it must be pretty close to one—that 314 of the approximately 800 employees of the Peoria & Pekin Union—over 39 per cent—are veterans of 25 or more years of service with the company. This was disclosed when President J. T. O'Dea presented special service pins to the 314, four of whom have each completed 50 or more years of service.

**A HOPEFUL SIGN** that life is returning to normal along flood-ravaged lines of the Santa Fe appeared in a recent embargo notice issued by the A.A.R. It was an amendment eliminating Shallow Water, Kan., from the list of communities embargoed due to high water. It appears that only hip boots will be needed there from now on.

**AIRLINE PILOTS COME HIGH:** United Air Lines has just entered a new wage and hours agreement with its "wild blue yonder" boys who pilot the DC-3's and the four-engined Stratocruisers. It seems a senior pilot may now earn from \$1,051 to \$1,512 (depending on the type of plane flown) for an 85-hour month. Copilots have to manage on an income of from \$675 to \$906 for a similar tour of duty. Deadheads traveling at the company's request to protect schedules have won pay of half flight time; "reserve" pilots, i.e., those on the "extra board," get a minimum guarantee.

**CHICAGO MOBILIZES — TO FIND MORE SCRAP:** To locate and bring into steel mills scrap that does not now move in regular channels, the Chicago Association of Commerce & Industry has formed a special "Steel Industry Scrap Mobilization Committee." Eleven leaders of major Chicago industries using steel make up the committee. Wayne A. Johnston, president of the Illinois Central, represents the railroads. Bearing in mind that scrap moving in normal channels is not enough to keep mobilization efforts from being seriously retarded, the committee is laying the groundwork for full participation of the association's 5,000 member firms in an "all-out" search for dormant scrap.

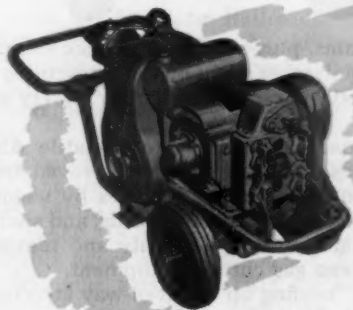


# **JACKSON**

## **UNIT TIE TAMPERS**

***Greatest Expeditors of Section Gang Productiveness!  
Surpassed, in EXTRA Gang Service, ONLY  
by the JACKSON MULTIPLE!***

By any comparison you wish to make, you'll find Jackson single unit tie tampers and Jackson Power Plants the finest means of mechanizing your section gangs and solving the labor shortage problem. The Power Plant, which serves one to four tampers, is easily portable and therefore suitable to the very small section gang employing only two tampers, as well as being ideal for the normal size gang. And since it generates both single-phase and 3-phase, 115 volt 60 cycle AC it may be used for lights and operating power tools as well as tamping. Quick interchangeability of blades makes the tampers exceptionally adaptable to every use to which tampers may be put, and where sections are equipped with these four-tamper outfits, they may be grouped for extra gang service in major ballasting operations with results that are exceeded only by the Jackson Multiple Tie Tamper. Let us tell you more about them.



Jackson Model M-2 Power Plant from which 1 to 4 tampers may be operated. Other models of 2 and 8-tamper capacity are available.



**ELECTRIC TAMPER & EQUIPMENT CO., Ludington, Mich.**



**STRENGTHENING** — Arc welding a flange reinforcing plate to a floor-beam of a railroad bridge. Airco No. 78E or 387 electrodes are generally used for this type of work. Strengthening operations like this prolong the life of a bridge far beyond normal expectancy.



**"SHRINK" FITTING** — Standard Airco oxyacetylene flame heating equipment is used to take the slack out of eye-bar tension members. Eye-bars as heavy as 10" x 2" can be shrunk without any apparent effect on fatigue strength or static strength.



**FLAME CLEANING** — Proper painting is vital to the life of a bridge. Here, Airco's Style 800 torch with Style 110 round tip loosens old paint, scale and rust, and drives off moisture. Flame cleaning is inexpensive and fast—often it's the only satisfactory way to prepare lattice-like structures for painting.

# "AIRCO HELPS Beef up" A BRIDGE

Today's diesel-powered fast-moving trains, plus stepped-up traffic requirements, call for "beefing up" bridges and other right-of-way structures to the point where these heavier loads may be carried with "top" safety and less maintenance.

For this reason many leading railroads are turning to versatile Airco oxyacetylene and arc welding processes. These time-tested, proved techniques are used to strengthen and reinforce bridge structures by welding plates, angles and other shapes to floor-beams, stringers, chords, and similar bridge members. All reinforcement materials can be easily and inexpensively cut to size with Airco oxyacetylene gas cutting equipment.

If you have a problem that calls for "beefing up" right-of-way structures to handle today's high-powered equipment, and stepped-up traffic, one of Airco's Railroad technical men will be glad to work with you—help you develop better methods of maintaining this highly important equipment. Get in touch with your local Airco office today for complete information.

*Costs Come Down  
Under the Airco Plan*



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# NEWS



## OF THE RAILROAD WORLD



### September Net, at \$50 Million, Less Than Half That of September 1950

Class I railroads in September had estimated net income, after interest and rentals, of \$50,000,000, compared with \$101,000,000 in the corresponding month last year, according to the Bureau of Railway Economics of the Association of American Railroads.

For the first nine months this year net income of Class I carriers is estimated at \$377,000,000, comparing with \$469,000,000 in the like period of 1950.

Estimated results for September 1951, showed net railway operating income, before interest and rentals, of \$75,724,639. In the same month last year this figure was \$122,955,543. For the first nine months of 1951 the carriers had net railway operating income of \$589,700,770, compared with \$680,351,673 for the 1950 period.

In the 12 months ended with September, the rate of return averaged 3.86 per cent compared with 3.63 per cent for the 12 months ended with September 1950.

#### Expenses Outgain Revenues

Gross in the nine months amounted to \$7,618,561,753 compared with \$6,757,696,350 in the same period of 1950, an increase of 12.7 per cent. Operating expenses amounted to \$6,020,189,115 compared with \$5,160,195,075, an increase of 16.7 per cent. For September, gross decreased 1.8 per cent, and operating expenses in-

creased 9.9 per cent, 1951 over 1950.

Twenty-four Class I roads failed to earn interest and rentals in the nine months, of which 14 were in the Eastern district, two in the Southern region, and eight in the Western district.

Class I roads in the Eastern district in September had an estimated net in-

come of \$17,000,000, compared with \$33,000,000 in September 1950. In the nine months, their estimated net income was \$127,000,000 compared with a net income of \$171,000,000 in the same period of 1950.

Their net railway operating income in September amounted to \$29,833,817, compared with \$43,485,709 in September 1950. Those same roads in the nine months had a net railway operating income of \$245,744,760 compared with \$280,277,805 in the same period of 1950.

Gross in the Eastern district in the nine months totaled \$3,404,136,401, an increase of 13.1 per cent compared with the same period of 1950. Operating expenses totaled \$2,753,078,104, an increase of 16.3 per cent.

Class I roads in the Southern region in September had an estimated net income of \$5,000,000, compared with \$12,000,000 in September 1950. In the nine months, their estimated net income was \$65,000,000 compared with a net of \$74,000,000 in the same period of 1950.

#### Net Operating Income

Those same roads in September had a net railway operating income amounting to \$8,967,826, compared with \$13,510,794 in September, 1950. Their net railway operating income in the first nine month, amounted to \$99,320,303 compared with \$103,984,025 in the same period of 1950.

Gross in the Southern region in the nine months totaled \$1,065,170,155, an increase of 13.3 per cent compared with the same period of 1950, while operating expenses totaled \$824,448,-

#### CLASS I RAILROADS—UNITED STATES

	Month of September	
	1951	1950
Total operating revenues .....	\$ 855,928,988	\$ 872,032,232
Total operating expenses .....	660,407,749	600,672,104
Operating ratio—percent .....	77.16	68.88
Taxes .....	105,667,570	132,850,141
Net railway operating income (Earnings before charges) .....	75,724,639	122,955,543
Net income, after charges (estimated) ..	50,000,000	101,000,000
Nine Months Ended September 30, 1951		
Total operating revenues .....	7,618,561,753	6,757,696,350
Total operating expenses .....	6,020,189,115	5,160,195,075
Operating ratio—percent .....	79.02	76.36
Taxes .....	857,337,404	783,172,146
Net railway operating income (Earnings before charges) .....	589,700,770	680,351,673
Net income, after charges (estimated) ..	377,000,000	469,000,000

199, an increase of 16.0 per cent above 1950.

Class I roads in the Western district in September had an estimated net income of \$28,000,000, compared with \$54,000,000 in September 1950. Their estimated net income in the first nine months was \$185,000,000 compared with \$224,000,000 in the same period of 1950.

Their net railway operating income in September amounted to \$36,922,-

996, compared with \$65,959,040 in September 1950. Those same roads in the nine months had a net railway operating income of \$244,635,707 compared with \$296,089,843 in the same period of 1950.

Gross in the Western district in the nine months totaled \$3,149,255,197, an increase of 12.2 per cent compared with the same period of 1950, while operating expenses totaled \$2,442,662,812, an increase of 17.2 per cent.

## More Rail Trucks Driven Out of "All-Motor" Service

Proceeding with its plan to drive trucking affiliates of railroads out of the so-called all-motor freight business, the Interstate Commerce Commission has added conditions designed to accomplish that purpose to several certificates originally issued on an unconditional basis to the Frisco Transportation Company, subsidiary of the St. Louis-San Francisco. The commission based its action on a finding which held that the unconditional certificates were issued "inadvertently."

Six certificates were involved in the proceeding—No. MC-89913 (Sub-No. 1) and related cases. They authorized Frisco Transportation Company's operations over six routes, totaling about 300 miles, between points in Arkansas, Oklahoma, Texas, Missouri, and Tennessee.

The railroad affiliate acquired the routes from independent operators several years ago—pursuant to commission reports, which in all cases said

the approved acquisitions would be subject to such limitations or restrictions "as the commission may hereafter find it necessary to impose in order to insure that the [trucking] service shall be auxiliary or supplementary to the train service of the [Frisco] and shall not unduly restrain competition." In only one of the six cases, however, was there a follow-through to include this reservation of authority in the certificate authorizing operation by Frisco Transportation of the routes acquired.

The present commission decision revoked the certificates, because they were "inadvertently issued," and ordered the issuance of amended certificates containing the usual conditions designed to insure that the trucking operations shall remain auxiliary to rail services of the parent railroads. The case thus raises a question which was not answered by the United States Supreme Court when it upheld com-

mission decisions calculated to drive trucking affiliates of the Chicago, Rock Island & Pacific and the Texas & Pacific out of the all-motor business. (*Railway Age*, March 5, page 64.)

In those cases, the reservations of authority were contained in the certificates themselves. And the court said its ruling left "unanswered" the question of the power of the commission to modify a certificate "so as to make its operation auxiliary to and supplemental of rail service, when no reservation for or restriction to that effect has been placed in the order directing the issue of the certificate or the certificate itself."

In leading up to its "inadvertently issued" finding, the commission explained its procedures with respect to the issuance of certificates. Certificates, it said, are made out on prepared forms by "clerical employees" who have "no discretionary authority."

"In performing this clerical duty," the report continued, "the employees in question exercise no judgment, discretion, or interpretative power . . . Their drafting of the certificate is not reviewed except by a supervisor, also without discretionary authority, solely to insure a correct reflection of the findings."

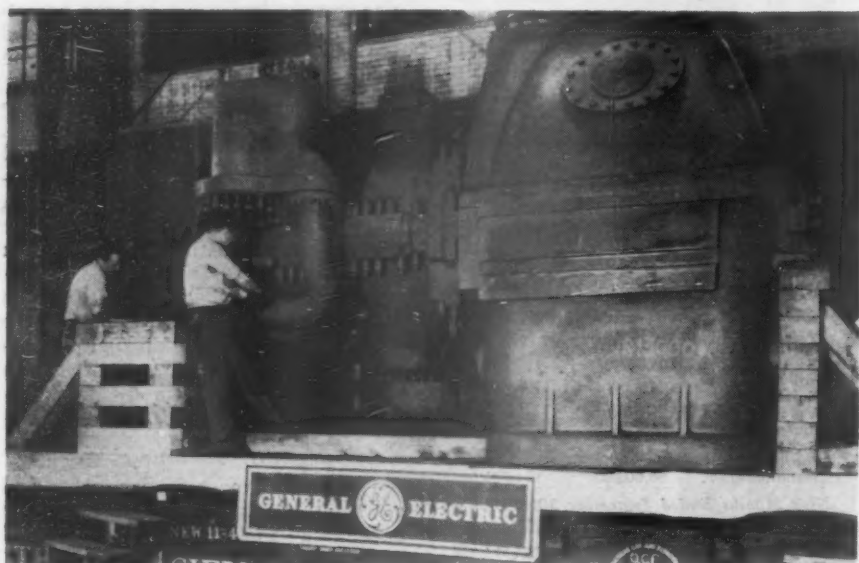
"The certificates here in issue, being based upon the findings in the finance proceedings, may not authorize operations greater than those for the performance of which the division authorized the purchase. To the extent that the certificates issued fail to reflect the character of authority contemplated by the findings, such deficiency or deviation from the findings was inadvertent and consequently the certificates, departing as they do from the findings in the finance reports, were inadvertently issued. Under these circumstances the certificates may be revoked, and certificates in accord with such findings issued, without proceeding in accordance with the provisions of section 212(a)."

This section sets out procedures of the "due process" variety as prerequisites to any commission action designed to suspend, or modify a certificate. The commission did not consider that it was taking such action in the present decision. It said: "No diminution of any authority actually authorized to be purchased, nor any partial revocation of any such authority, is involved."

## N.M.B. Certifies Union Shop Cases to White House

The National Mediation Board last week referred to President Truman the disputes involving demands of railroad non-operating employees for agreements providing for the union shop and check-off of union dues. The employees are represented by 17 of the so-called non-op unions, and the demands have been served on 393 railroads.

In referring the cases to the White



**TURBINE SHIPPED ON SIX CARS**—A steam turbine weighing more than 140 tons was recently shipped by railroad from the Lynn River (Mass.) Works of the General Electric Company to the Dow Chemical Company, Freeport, Tex. The turbine—the largest ever built at Lynn River—was designed with removable foot brackets on the exhaust cas-

ing to permit the machine to meet railroad tolerances. This feature made it possible to ship the complete unit on six freight cars over normal railroad routes. The turbine has a capacity of 30,000 kw. and is a single-flow, tandem-compound, double-exhaust type with two standard exhaust casings instead of one



House, the mediation board made the certification which the Railway Labor Act requires as a basis for appointment by the President of an emergency board, i. e., that the disputes "threaten substantially to interrupt interstate commerce. . . ."

N. M. B. is understood to have decided upon this action after its consideration of a recent letter from the unions. The letter advised that the employees would use their "economic strength" to enforce their demands were it not for the fact that the railroads are being operated by the Federal government. Thus the certification would seem to reflect an N. M. B. view to the effect that the employees are entitled to have their cases referred to an emergency board without actually posing a strike threat.

The Mediation Board has been unsuccessful in its efforts to bring about settlements through "concurrent-mediation" procedures. That undertaking of the board served only to point up the general opposition of railroad management to consolidation of the cases for national or regional handling. Arbitration proposals of the board were rejected by the unions.

### New Parcel Post Limits Are Effective January 1

Legislation setting new size and weight limitations on parcel post, signed by President Truman October 24, will become effective January 1, 1952.

With some exceptions, parcels sent by mail after that date will have a size limitation of 72 inches in length and girth combined, and a weight limitation of 40 pounds in the first and second zones. The weight limit is 20 pounds in the third to eighth zones.

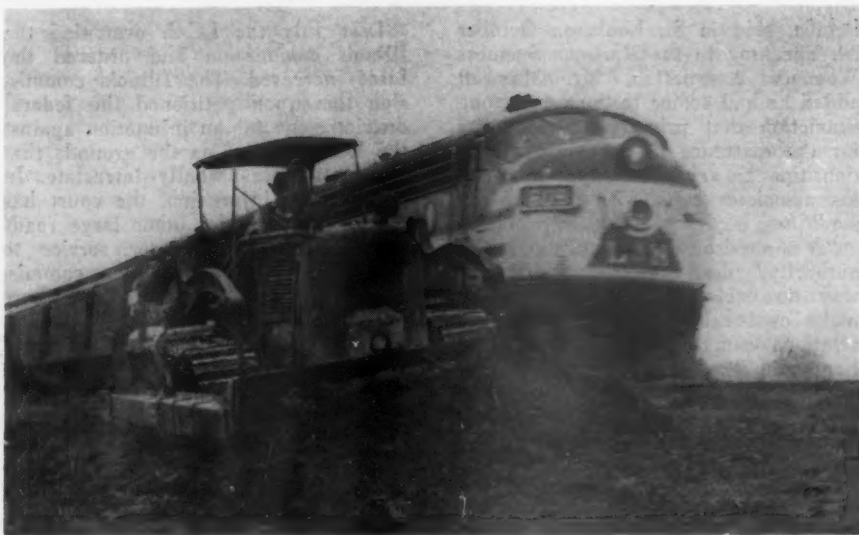
In the case of "exceptions," the size limit will be 100 inches in girth and length combined, while the limit in weight will be 70 pounds.

These exceptions include parcels mailed at or destined to second-, third-, or fourth-class post offices. They also include parcels mailed at or destined to army or fleet post offices, and parcels originating or destined for rural or star route delivery.

President Truman has also signed legislation which will increase postal rates generally. Fourth-class rates are not affected, however, since they were increased October 1 under authority from the Interstate Commerce Commission.

### Canadian Rate Equalization "Will Take Time"

Canadian Transport Minister Lionel Chevrier told the House of Commons at Ottawa that it will take time to bring about an equalization of freight rates in Canada; much study will be required before a general overhaul of the freight-rate structure can be made by the Board of Transport Commissioners.



**SHADES OF PETER COOPER!**—This Louisville & Nashville diesel and railroad-owned International TD-14 crawler tractor and angle dozer appear to be engaged in a race along the main line

near Mt. Vernon, Ill. The tractor's advantage was only momentary, however, as the train went on its way at 80 m.p.h., while the crawler stayed behind to improve the bank for ballast

Mr. Chevrier spoke in introducing a resolution to a bill that will give legislative effect to some of the recommendations of the Royal Commission on Transportation (*Railway Age*, March 26, 1951, page 42).

The bill will authorize payment of a subsidy of not more than \$7 million a year to the Canadian National and Canadian Pacific for maintenance of trackage in sparsely settled areas of Northern Ontario. It will give the Board of Transport Commissioners power to make uniform freight rates as far as possible for all sections of Canada. Crow's Nest Pass rates, providing for low rates on certain traffic in western Canada, and the Maritime Freight Rates Act, providing for similar rates on some maritime traffic, will not be affected by the legislation.

The legislation, along with two other minor measures affecting the railways, will be referred to a committee for detailed study.

### "Rate Hike a Boon For U. S. Treasury, Too"

That future freight rate increases for the railroads may be of as much — if not more — benefit to the United States Treasury than to the railroads themselves, was suggested by Z. C. Hopkins, of the Association of Western railroads, in a speech to the Northwest Shippers Advisory Board in Grand Forks, N. D., on October 25.

Mr. Hopkins said the need for the higher rates arises from increasing taxes and rising wages — two factors over which the railroads have no control. "Largely through the influence of public policies," these two items have increased \$3.5 billion since 1939. This greatly increased cost of doing business could not possibly have been met without rate increases allowed by the

Interstate Commerce Commission, he declared.

Mr. Hopkins pointed out that although last year's freight traffic was 60 per cent greater than before Pearl Harbor, if handled at pre-war rates it would have failed by \$200,000,000 to meet the railroads' 1950 operating costs. Since that would have meant no profits, he said, there would have been no government tax revenues from the railroads. "So whatever else may be said about freight rate increases since the end of the war, the fact stands out that they made it possible for the railroads to pay a total tax bill of almost \$1.2 billion in 1950 — an amount about double combined interest charges on debt and dividend appropriations."

Mr. Hopkins termed last year's tax bill and further increases in federal taxes for 1951 "realities that cannot be dodged if rates are to insure adequate revenues to the railroads, any more than increased cost of maintaining roadway, which it almost equalled last year. Additions to revenues, whether due to heavier traffic or higher rates, do not add to railroad ability to provide adequate services if they are absorbed by accompanying increases in tax bills."

It is in the government's own interest, he asserted, to permit an adequate return on business investment, if business is to be expected to support the government.

### Supervisory Relationships Important RR Problem

One of the most important problems facing the railroad industry today is the need for better understanding between supervisors and those supervised, R. J. Maxwell, director of publicity and advertising for the Missouri



Pacific, said in St. Louis on October 20. Speaking to the Railway Business Women's Association, Mr. Maxwell added he had "come to the very strong conviction that primary responsibility for the existence of harmonious relationships between the supervisor and his associates rests with the supervisor."

"A supervisor must be cloaked with authority," he continued, "and the way he exercises his authority can make or break his company's public relations campaign. One who is not happy in his work cannot be—will not be—a good public relations representative. The supervisor must remember that he is still the same human being that he was before his advancement. He must keep both feet on the ground while administering the work of his office or shop in a humane and just manner. He must listen, lead, praise and inculcate in each of his associates a sense of belonging to the team instead of having them feel that he or she is merely a number or labor statistic. If he can do these things he will have a winning team. He will have good associate relations—and his company, good public relations."

### New Transport Office

An Office of Transportation has been established by the Munitions Board, Department of Defense, "to handle problems arising from increased military requirements."

The new office will be headed by Colonel Charles H. Voeller, with William P. Guilder as deputy. Kenneth L. Vore, director of the Defense Department's Military Traffic Service, has been named transportation advisor to the Munitions Board chairman.

"The growing importance of transportation in the field of logistics planning necessitates elevation of the transportation office to the same staff level with other Munitions Board key responsibilities," M. B. Chairman J. D. Small said.

### Court Upholds I.C.C. In I.C. Fare Increase

Three federal district court judges refused to interfere with an Illinois Central suburban fare increase authorized by the Interstate Commerce Commission.

The I.C.'s Chicago suburban services is wholly intrastate. The railroad which had turned to the federal commission for an increase in fares after being turned down by the Illinois Commerce Commission, based its action on grounds that losses incurred by the suburban service constituted a burden on interstate commerce and that the fares (which had reached the maximum provided under a now-dead Illinois law), were prejudicial to interstate passengers served by the road. (*Railway Age*, September 10, page 58).

Last July the I.C.C. overruled the Illinois commission and ordered the fares increased. The Illinois commission thereupon petitioned the federal district court for an injunction against the I.C.C.'s order on the grounds that the matter was wholly intrastate. In denying the injunction, the court has opened the way for other large roads with interstate passenger service to "get out from under" state commissions in suburban fare cases where only intrastate commerce is involved. The Illinois commission has intimated it will carry the case to the United States Supreme Court.

The suburban services will receive an added \$1.3 million in revenue under the increased fare structure. Joseph H. Wright, general counsel for the road, pointed out, however, that more than \$3 million in potential revenue "went down the drain" during the 18 months the matter was before the commissions and the court.

In its case, the I.C. maintained it was losing about \$100,000 a month on its suburban business. The decision said "it has been found that the railroad's multiple and commutation fares are not producing their fair share of the earnings required to enable the railroad to meet its maintenance and operating costs and to yield a fair return on the value of the property devoted to transportation service, both interstate and intrastate, and hence are discriminatory revenue-wise against its interstate traffic."

The decision was handed down by Judges Philip J. Finnegan of the Court of Appeals and Joseph Sam Perry and William J. Campbell of the district court in Chicago on October 31.

### Court Approves Wyer as Trustee of Long Island

The United States District Court at Brooklyn, N. Y., has approved appointment of William Wyer, consulting engineer and formerly chief executive officer of the Central of New Jersey, as trustee of the Long Island. Mr. Wyer succeeds William H. Draper, Jr., who, as reported in *Railway Age*, November 5, page 17, has resigned as trustee of the railroad to devote his entire time to the Long Island Transit Authority, of which he is chairman.

### I.C.C. Will Hear Argument In Fast Write-Off Case

The Interstate Commerce Commission will hear oral argument at Washington, D.C., November 20 on issues raised by its recent notice setting forth a proposed order under which carrier reports would no longer reflect accelerated amortization of equipment and facilities acquired to handle defense-traffic loads. The case is docketed as No. 30920.

The order assigning it for argument noted that "conflicting opinions" have been expressed as to the proposed ac-

counting policy. More than 100 railroads have joined in asking that the proposed order be rescinded, while other roads and the National Coal Association are supporting the proposed order as now written or with the addition of so-called tax-equalization provisions. (*Railway Age* of October 29, page 14.)

### C.A.B. Extends Air Coach Service Another 90 Days

Air coach service on the air lines will be extended 90 days beyond the scheduled expiration date of December 31, 1951. The Civil Aeronautics Board, which announced the extension, is presently reviewing the entire air coach problem. After the survey the board expects to be able to provide a more detailed basis for long-range development of air coach service.

Nine of the 16 trunk air lines in the United States are now conducting reduced-fare air coach service.

### Emergency Board Gets Firemen's Wage Case

President Truman last week appointed an emergency board to investigate the long-stalemated dispute involving wage and rules demands of the Brotherhood of Locomotive Firemen & Enginemen. The President acted after the brotherhood had called a strike for 3:00 p.m. November 8 against four roads.

After creation of the board, the brotherhood postponed the strike indefinitely. As it had been set up, the threatened walkout would have affected these roads: Baltimore & Ohio; Louisville & Nashville; Chicago & North Western, including the Chicago, St. Paul, Minneapolis & Omaha; and the Terminal of St. Louis.

Members of the board are Chairman Carroll R. Daugherty, professor of economics, Northwestern University; George Cheney, labor relations consultant of San Diego, Calif.; and Andrew Jackson, attorney of New York. They will begin public hearings in Washington, D. C., on November 27, the parties having agreed on that date and the necessary extension of the time which the board will have to make its report. The regular schedule calls for a report within 30 days after creation of a board.

Messrs. Daugherty, Cheney, and Jackson comprised a recent board which passed upon a wage dispute involving demands of Pullman conductors. There they recommended a settlement on the basis of a Pullman-Company proposal which is on the pattern of recent settlements in railroad cases. The Order of Railway Conductors didn't like that report which made "no contribution whatever toward a settlement," according to O.R.C. President Roy O. Hughes. (*Railway Age* of October 15, page 107, and October 22, page 58.)

The railroads have offered to settle

with the B. of L. F. and E. on the so-called pattern basis, i.e., on the basis of the settlement reached with the Brotherhood of Railroad Trainmen. The Firemen's union, however, has pressed for more as have two other unions representing operating employees also involved in stalemated cases—the Brotherhood of Locomotive Engineers and the O.R.C.

Meanwhile, the railroads remain under Army control, President Truman having seized them in August 1950, in the face of a strike threat posed by the O.R.C. and B.R.T. And the courts might be expected to enjoin a walkout. Nevertheless the strike-threat maneuver got the B. of L. F. & E. an emergency board. Presumably, the B. of L. E. could get like treatment, but the O.R.C. case has already been passed upon by an emergency board.

### Railroads Get More Time On Uniform Classification

Acting on a request of the railroads, the Interstate Commerce Commission has set February 1, 1952, as the deadline for filing a uniform freight classification in the long-pending No. 28300 and No. 28310 proceedings. The previous deadline was December 1. The railroad request for more time was contained in an October 11 letter to I.C.C. Chairman Splawn. (*Railway Age*, October 22, pages 13-14).

The uniform classification, and the scale of class rates prescribed by the commission as applicable thereto, will become effective 120 days after filing. This will give shippers "full opportunity" to examine the new classification and new class rates and file petitions for suspension of individual items where they so desire.

In granting the 60-day extension the commission also prescribed a "special rule of practice" to govern the filing of protests to particular items in the proposed uniform freight classification or class rate tariff.

Protests and requests for suspension should be filed by April 1, 1952, and replies to such protests should be filed by May 1. Protestants should, among other things, state the reason for their protest, indicate in what respect a specific item is considered unlawful, and state what is offered by way of substitution.

### I.C.C. Reports on July 10 Accident Near Muncie, Ind.

The Interstate Commerce Commission has recommended that the New York Central "promptly arrange to have wheels on diesel-electric locomotive units cleaned and carefully inspected at maintenance terminals at the end of each trip," and that "locomotive units also receive inspection of running gear at all points where air brake tests are required to be made."

The recommendation was embodied in a report which found that the July

10 derailment of the Central's Train No. 41, the "Knickerbocker," near Muncie, Ind., was caused "by failure of a driving wheel under a diesel-electric locomotive unit, resulting from progressive fracture in the plate section." The report (No. 3416) was by Commissioner Patterson, and the investigation out of which it came was conducted by the commission's Bureau of Locomotive Inspection.

Fourteen employees and 59 passengers were injured in the derailment which occurred when No. 41, a 13-car train, was traveling at a recorded speed of 62 m.p.h. The diesel involved was the trailing unit of a two-unit locomotive. The involved unit and the train's first 11 cars were derailed.

In leading up to its recommendation, the commission referred to testimony during the investigation which "indicated that wheels are visually inspected before and after turning but receive merely routine inspections while in service." Other testimony, as the com-

mission summarized it, "developed that car inspectors made inspections of wheels, journals, boxes, and air brakes on cars but gave little attention to the locomotive units aside from observing that brakes applied when brake tests were made."

"Driving wheels under diesel-electric locomotives," the commission continued, "are subject to very severe service. Operating speeds are high; peripheral speeds of the smaller diameter wheels are much higher than obtain in the larger driving wheels used under steam locomotives and in addition the wheels are subject to heavy starting and driving stresses."

"A driving wheel axle under a diesel-electric unit carries approximately half the weight of the traction motor through the support bearings. This heavy upspring weight adds to the complex system of stresses in the wheel assemblage. Because driving wheels under diesel-electric locomotive units are subject to complex stresses, the



**THIS NEW SOO LINE STATION** just opened at Oshkosh, Wis., provides passengers in the waiting room (in foreground of upper picture) a clear view of arriving trains through a full-width "wall of glass." Illumination of the ticket office is accomplished by application of glass block above the bay win-

dow, while clerestory windows on the parking lot side of the building (lower picture) permit "solar" lighting control by the overhanging eave. Of unusual interest are the neon sign on the chimney, the eave-sheltered mail and express loading door and the modern, high-candlepower platform lighting



observation and inspection of diesel wheels should be thorough and exact.

"Failure of the subject wheel which was responsible for the accident resulted from a progressive crack which probably did not develop within a short time interval. Evidence presented during the investigation indicated that the method of inspection of diesel-electric locomotive units followed by the railroad was not such that progressive cracks in diesel driving wheels would be readily discovered."

In reaching the point of derailment, the diesel unit (No. 4112) had run, "without any known unusual incidents," approximately 820 miles from Harmon, N. Y. As part of No. 41's consist it was coupled in multiple-unit control with a leading diesel unit. The commission's investigation indicated that it was N.Y.C. practice to run diesel-electric locomotives assigned to Train 41 from Harmon to St. Louis, Mo., with train inspections at intermediate points. "After a 1¼-hour layover and unit inspection at St. Louis the locomotives are dispatched on Train 24 to Harmon," the report added.

One of the intermediate-point inspections was given No. 41 at Bellefontaine, Ohio, from which point it ran non-stop, 88.8 miles to Muncie, and then three miles to the point of derailment. As summarized by the commission, the testimony of two car inspectors, who made the Bellefontaine inspection, "was to the effect that the purpose of their inspection was the testing of air brakes on the entire train and inspection of journal boxes and wheels under the cars; that they checked to see that brakes set on the locomotive units but did not examine locomotive journal boxes or locomotive parts other than make a passing observation."

This testimony "was corroborated by the general car foreman," the report also said. It added that a "report of the superintendent stated that no inspection was made of diesel units at either Cleveland or Bellefontaine by mechanical department employees."

### Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ended November 3 were announced by the Association of American Railroads on November 8 as follows:

	Surplus	Shortage
Plain Box	97	4,278
Auto Box	20	65
<b>Total Box</b>	<b>117</b>	<b>4,343</b>
Gondola	0	3,367
Hopper	0	5,100
Covered Hopper	0	63
Stock	100	252
Flat	8	835
Refrigerator	2,117	0
Other	281	95
	<b>2,623</b>	<b>14,055</b>

All of which made it appear to the commission "that car wheels, journals and boxes, and brakes receive inspections at intermediate points between Harmon and St. Louis but inspections, other than a casual observation of brake operation by car inspectors, are not made of the locomotive units from the time of departure to arrival at the final destination."

"The superintendent of equipment," the report continued, "stated that axles of diesel-electric locomotive wheels are magnaflux tested when the wheels are turned and that the wheels are visually examined for flaws or other defects both before and after the turning operations. Inspection of wheels under locomotives is done in routine manner with no special provision for inspection of the inner face of the wheels."

The wheel which failed was a Class C MW wrought steel wheel, 36 in. in diameter and having a rim thickness in excess of 2½ in. when new. Stampings indicated that it was new in September 1949. It was first placed in service on a N.Y.C. diesel unit May 17, 1950. On August 1, 1950, it was removed and its rim thickness was turned down to 2½ in. On August 19, 1950, it was placed under another N.Y.C. diesel unit where it remained until April 22, 1951.

On that date it was removed and its rim thickness was turned down to 1¾ in. It was installed under unit No. 4112 on April 25, 1951, and remained there in position B4 until it failed. The rim thickness was 1½ in. at the time of failure, the tread wear was ⅛ in., and the flange was one in. thick.

The unit had received its latest monthly inspection on May 25, 1951, at Harmon. The latest daily inspection and repair report furnished by the railroad in the investigation was dated June 7, 1951, at 7:50 a.m. at Harmon. "Daily inspection and repair reports for 30 days prior to the accident... were examined and no defects were found reported that had any bearing on the accident," the commission also said. "Thirty-four daily inspection reports from Harmon covering period prior to the accident were examined. ...The time of inspection was entered on only one report and 17 reports did not carry the approving signature of a foreman."

Four pieces were broken from the rim of the wheel with the inner fracture of each originating in the plate just below the rim. The plate fracture was an arc 44 in. in length. Minimum thickness at fracture was 1 in. The tread of the wheel was free from defects—"except small skid burns and numerous very small thermal cracks which had maximum length of ¼ in. and did not appear to have contributed to the failure."

Reporting on findings made by its investigators after their study of recovered parts of the wheel, the commission traced the development of the break from what the report called an

"old progressive fracture." This discussion was illustrated by five sketches which comprised part of the report.

### Freight Car Loadings

Loadings of revenue in the week ended November 3 totaled 837,743 cars, the Association of American Railroads announced on November 8. This was a decrease of 26,218 cars, or 3 per cent, compared with the previous week; a decrease of 25,406 cars, or 2.9 per cent, compared with the corresponding week last year; and an increase of 258,762 cars, or 44.7 per cent, compared with the equivalent 1949 week.

Loadings of revenue freight for the week ended October 27 totaled 863,961 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, October 27			
District	1951	1950	1949
Eastern .....	141,853	151,973	112,092
Allegheny .....	174,597	175,121	90,084
Poconchos .....	68,744	68,086	19,820
Southern .....	135,632	134,805	105,263
Northwestern ..	133,113	148,009	82,854
Central Western ..	142,761	142,396	130,876
Southwestern ..	67,261	67,545	50,326
<b>Total Western Districts .....</b>	<b>343,135</b>	<b>357,950</b>	<b>264,056</b>
<b>Total All Roads .....</b>	<b>863,961</b>	<b>887,935</b>	<b>591,315</b>
Commodities:			
Grain and grain products .....	52,834	58,974	54,870
Livestock .....	17,584	16,213	18,494
Coal .....	167,952	163,220	53,943
Coke .....	16,309	16,354	4,038
Forest products ..	46,231	46,537	41,782
Ore .....	73,997	75,524	7,284
Merchandise l.c.l.	75,457	88,046	88,465
Miscellaneous ..	413,617	423,067	322,439
October 27 .....	863,961	887,935	591,315
October 20 .....	886,648	891,230	589,088
October 13 .....	868,683	888,889	583,948
October 6 .....	858,750	863,903	574,228
September 29 .....	864,573	880,186	658,128
<b>Cumulative total 43 weeks .....</b>	<b>33,820,290</b>	<b>32,030,816</b>	<b>30,151,557</b>

**In Canada.**—Carloadings for the week ended October 27 totaled 88,422 cars, compared with 89,202 cars for the previous week and 92,516 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
<b>Totals for Canada:</b>		
October 27, 1951 .....	88,422	34,669
October 28, 1950 .....	92,516	36,243
<b>Cumulative totals for Canada:</b>		
October 27, 1951 .....	3,459,878	1,486,879
October 28, 1950 .....	3,192,014	1,343,709

### September Employment

Railroad employment decreased 0.73 per cent—from 1,295,941 to 1,286,469—from mid-August to mid-September, but the mid-September total was 0.23 per cent above that of September 1950, according to the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

The index of employment, based on the 1935-1939 average as 100, was 123 for September, compared with 124.4 for the previous month and 122.8 for September 1950.

September employment was above that of the previous month in four

groups and down in the other three. All of these changes amounted to less than one per cent, except the 3.12 per cent drop in the maintenance of way and structures group.

As compared with September 1950, there were also four increases and three declines. Increases which amounted to more than one per cent were rises of 2.63 per cent and 2.27 per cent, respectively, in groups embracing executives, officials and staff assistants, and professional, clerical and general employees. Only one of the declines amounted to as much as one per cent. It was a drop of 1.61 per cent in the group embracing transportation employees other than those in train, engine or yard service.

### Sacramento Northern Moves Its Headquarters

The Sacramento Northern has announced transfer of its general offices from the old Union Station building on Terminal Way, Sacramento, Cal., to the division office building of the Western Pacific, 1025 19th st. The move will permit closer coordination between the S.N. and its parent carrier, the W.P., and will release the Union Station building for other uses. The Union Station was opened in 1926, but since the last S.N. passenger train was operated in October 1940 the building has been partially converted to commercial purposes.

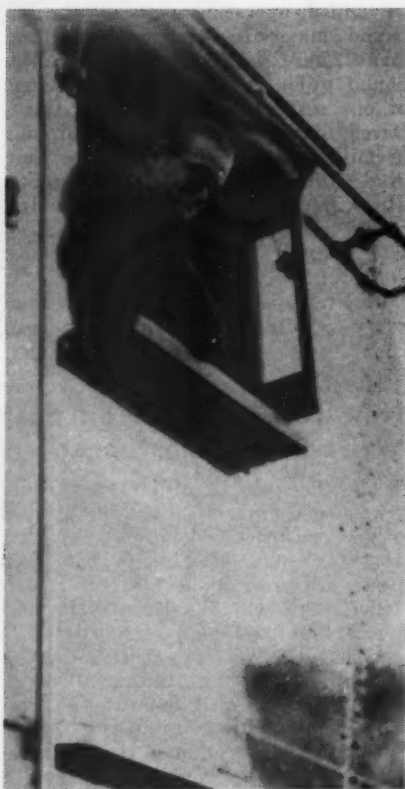
### Chicago Plans March World Trade Conference

Plans are being formulated for a world trade conference to be held in Chicago on March 6 and 7. Sponsored jointly by the Chicago Association of Commerce & Industry and the Export Managers Club of Chicago, Inc., the conference is expected to draw over 1,000 delegates from all parts of the country. Details of the program have not yet been announced but it will include addresses by government officers, leading exporters and importers and international bankers, and panel discussions on current world trade problems.

### Santa Fe Forms Uranium Mining Company

The Atchison, Topeka & Santa Fe has announced formation of a new corporation—the Haystack Mountain Development Company—for mining uranium ore recently discovered by a Navajo sheepraiser on Santa Fe property near Grants, N. M. (*Railway Age*, December 23, 1950, page 36).

Organized under laws of the state of Delaware, the new company will have offices in Albuquerque, N. M. All stock will be owned by the Santa Fe. Fred G. Gurley, Santa Fe president, will be president of the mining company. Other officers include: R. C. Rydin (vice-president, Santa Fe),



THE DUKE OF EDINBURGH, husband of Princess Elizabeth, in the cab of Canadian National locomotive 6401 which he recently "highballed" for 14 miles between Vineland, Ont., and Winona, during the royal couple's tour of Canada and the United States. The duke received his instructions from Engineman A. S. Heron

vice-president; E. S. Marsh, (vice-president—finance, Santa Fe), vice-president—finance; J. C. Gibson, (vice-president and general counsel, Santa Fe), vice-president — general counsel; C. A. Menninger, (assistant treasurer, Santa Fe), secretary-treasurer; and T. O. Evans, who holds the title of mining engineer of both companies.

The Haystack company is presently negotiating with the Anaconda Copper Company for sale and delivery of the ore when mined, and the Anaconda company is, in turn, negotiating with the Atomic Energy Commission for permission to construct a mill for processing the ore.

### Knudson Supports Truckers' Petition for Radio Rights

Use of radio to facilitate collection and delivery operations by truckers in metropolitan areas "will promote the national defense in a number of ways," according to Defense Transport Administrator James K. Knudson. He made the statement in a recent letter to the Federal Communications Commission.

The letter supported a petition wherein American Trucking Associa-

tions has asked F.C.C. to amend its eligibility rules so as to make collection and delivery truckers eligible for use of radio communications. If that were done, Mr. Knudson said, it would increase the productivity of the trucking operations involved.

### John Cunningham Becomes D.T.A. Information Officer

John Cunningham has been appointed information officer of the Defense Transport Administration, succeeding Charles S. Baxter who resigned recently to become chairman of the Railroads' Tariff Research Group.

Mr. Cunningham has been employed by the Interstate Commerce Commission since 1927, most recently as an examiner in its Bureau of Water Carriers and Freight Forwarders.

### I.C.C. Grants More Time For Replies to Rate Plea

The Interstate Commerce Commission has extended until November 15 the period within which interested parties may file replies to the railroads' petition for further hearing in the Ex Parte 175 freight-rate case. The petition asks the commission to reconsider its decision of last August and authorize the full 15 per cent increase which the carriers sought.

The increases authorized by the commission average about 6.6 per cent over-all. (*Railway Age* of October 29, page 15, and August 20, page 55.)

### Air Story: Subsidy Pay Eclipses Mail Payment

Robinson Airlines Corporation, an air carrier in New York state, has been tentatively authorized \$663,729 a year in "mail pay" by the Civil Aeronautics Board. Reflecting the board's views of what is economically sound in air transportation, this payment breaks down into a subsidy payment of \$638,729 and service mail pay of \$25,000.

This annual rate of payment shall apply as of July 1, 1951. The board has ordered the air line to "show cause" why such "mail rates" should not be established as final rates.

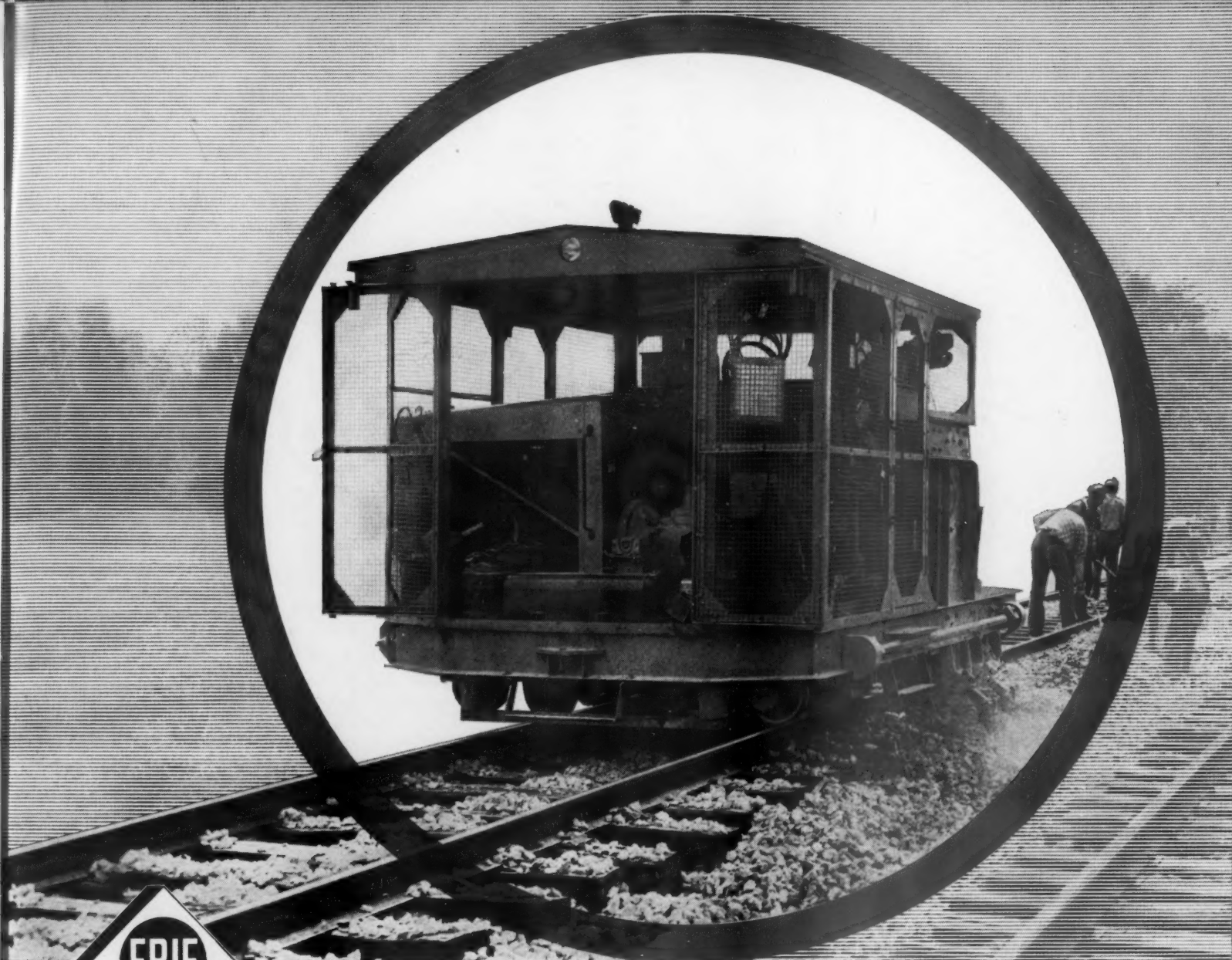
Future-year break-even needs of the air line were set at \$547,699. The board found this a "reasonable" figure to use in determining the carrier's future mail pay. Meanwhile, the board also found the air line's net investment to be \$881,271 for the year beginning July 1, 1951.

Annual nonmail revenues of the air line were estimated at 68.39 cents per revenue plane-mile, while total operating expenses were estimated at 101.55 cents per revenue plane-mile. The board said the expense level "appears high," but "does not appear to be unreasonable."

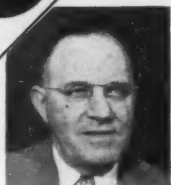
In setting future mail-pay rates for Robinson Airlines, the C.A.B. also fixed a "fair and reasonable" mail rate for the period of September 19, 1948,







...another road  
that can show you  
why your best main-  
tenance of way in-  
vestment is a Power  
Ballaster.



**Here's what YOU can expect  
from the POWER BALLASTER**

**Triple-Action Compaction**—Tamps down, then under, then up—for an under tie ballast foundation that fully meets AREA standards.

**Low Labor Requirement**—Easily handled with as little as two 5-man gangs.

**High Production at Low Cost**—450 to 750 feet of tamped track per hour often pays for the Power Ballaster in one season.

**Versatility**—Tamps raises from 0" to 8" on rail of any weight, with any ballast.

**Maximum Use of Track Time**—Powered jacks permit 4 men to make lateral set-off in 3 to 5 minutes... 25 MPH speed for fast runs to siding, crib or work locations.

## "Lower Costs per tamped foot

### THAN WE HAVE EVER BELIEVED POSSIBLE"

Practically any railroad can experience big reductions in track maintenance costs after once using the Power Ballaster. Why?

On the Erie Railroad, for example, Power Ballasters tamp an average of 3000 feet per 6½ hour day... 461 feet per hour! Blair Blowers, Chief Engineer, Maintenance of Way, speaks with authority on the results of this kind of tamping:

"... because of this machine's exceptional production rate, lower labor requirement, and powerful triple-action compaction, we get a lower cost per tamped foot than we had ever believed possible."

The Erie is one of many roads which kept records that conclusively prove one fact: mile after mile you get lower cost tamping and higher quality track with the Power Ballaster! Let an experienced Power Ballaster Representative show you how you can make savings in your track maintenance. Write us today.

TRACK AT ITS LEVEL BEST... AT THE LOWEST COST



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## **G.M.&O. MODERNIZATION PROGRAM INCREASES LOCOMOTIVE UTILIZATION 72%**

As the first major Class I Railroad to be completely dieselized, the Gulf, Mobile and Ohio Railroad is in a unique position to report results of its motive power revolution.

*GM&O Dieselization has:*

- 1. INCREASED LOCOMOTIVE UTILIZATION 72%** . . . principal freight locomotives now averaging 215 miles per day against 125 for steam engines.
- 2. MADE HEAVIER FREIGHT TRAINS POSSIBLE** . . . gross ton-miles per train mile 45 per cent higher than before dieselization.
- 3. SPEEDED FREIGHT SERVICE** . . . even with heavier loads, average freight train speeds in various districts have been increased between 3.0 and 4.8 mph.

GM&O's fleet of 243 diesel-electric units—of which the largest number are Alco-GE locomotives—are revenue producers around the clock . . . winning new traffic to the rails and protecting the old.

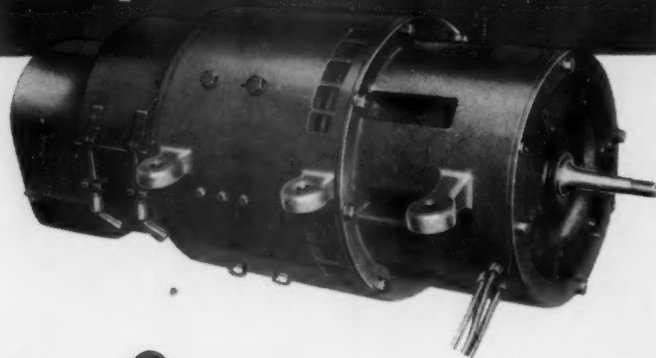


**AMERICAN LOCOMOTIVE  
and  
GENERAL ELECTRIC**

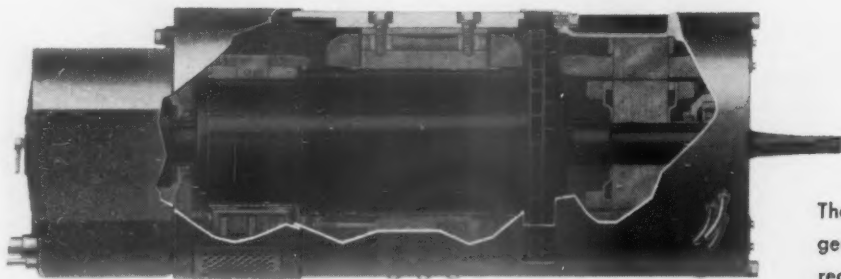
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# **"SAFETY" 25 KW and 30 KW Genemotors Have Attained PERFORMANCE RECORDS Which Establish Them As Standard Equipment For All Cars With Heavy Electrical Loads**



- Low full load speed
- 20 or 32 HP AC motor
- Positive reversing switch
- Full capacity with low temperature rise
- Excellent commutation
- Low internal losses
- Sleeve mounted armature removable from shaft



The cutaway illustration reveals a distinctive "SAFETY" genemotor feature . . . the sleeve mounted armature, readily removable from the shaft as a separate unit. This is an example of "SAFETY" engineering . . . resulting in long life with minimum operating cost.

**THE SAFETY CAR HEATING AND LIGHTING COMPANY INC.**

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SAFETY COMPANY PRODUCTS INCLUDE: Complete Air-Conditioning Equipment • Genemotors • Generators • Fans • Regulators • Lighting Fixtures • Switchboards • Parcel Racks • Generator Drives • Motor Alternators



## *A clear track to more traffic*


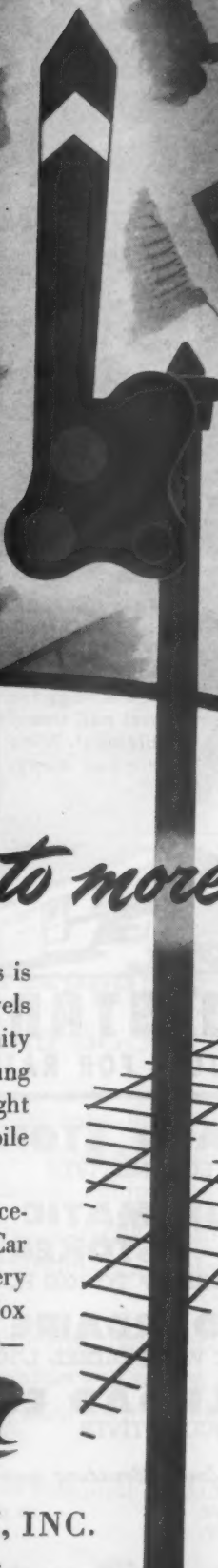
The opportunity for greater volume business is open today to all railroads. Current high levels of freight traffic prove it. But this opportunity cannot be fully realized if your road is hamstrung by outworn or obsolete equipment . . . freight cars that cost too much to keep rolling or pile up too much time in the shop.

That's why, when you're considering car replacement, it pays to remember Pressed Steel Car Company. Years of experience are behind every custom-built or standard Pressed Steel Car. Box cars, refrigerator cars, gondola or hopper cars—all are engineered for maximum operating efficiency and economy. Your operating figures will prove it.



**PRESSED STEEL CAR COMPANY, INC.**

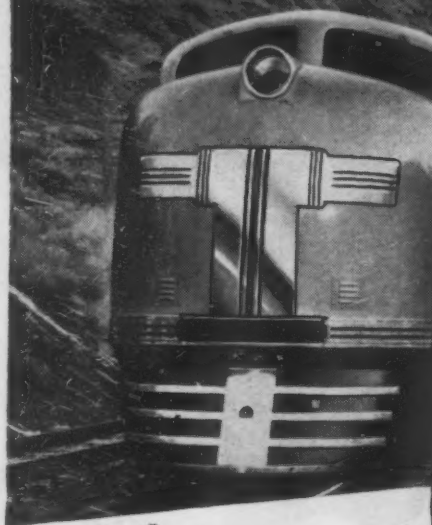
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<b>FIRST</b> all steel hopper car 1897
<b>FIRST</b> all steel box car 1914
<b>FIRST</b> UNICEL 1950



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AND BUSHINGS  
CUT  
"OUT-OF-SERVICE"  
TIME**



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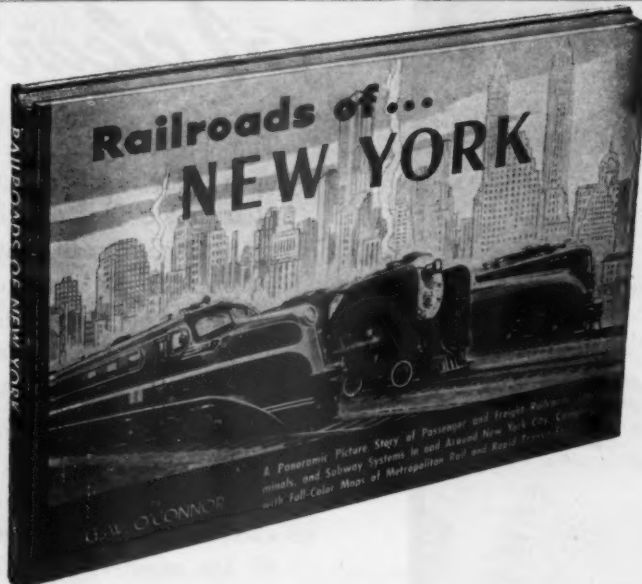
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*Add a touch of Magic* to your reconditioned cars  
with **NP Automatic** END DOOR OPERATORS!

When planning the modernization of your cars, be guided by this significant fact — more than 25 Class 1 railroads now use NP Automatic End Door Operators, on both new and remodeled passenger equipment.

NP Automatic End Door Operators allow passengers to open car doors at the touch of a fingertip — and the doors automatically close silently and safely.

Although a small item in terms of size and cost, NP Automatic End Door Operators pay huge dividends in passenger comfort and safety, in trouble-free operation and easy maintenance. In addition, their swift, smooth operation brings savings in air-conditioning costs.

Write for Publication No. 1063, which gives complete details.



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**ABSORPTION!**

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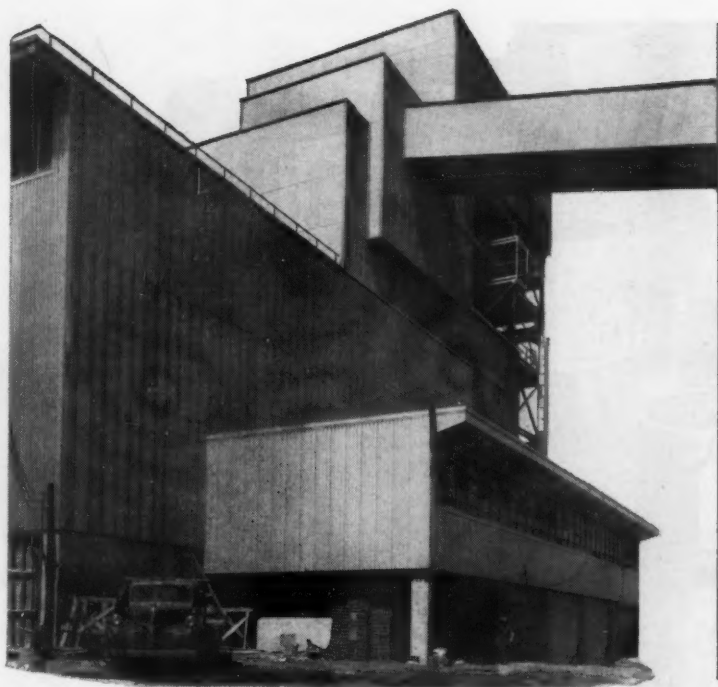
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in freight-carrying service are A.A.R.  
construction and over 96% have  
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The shock-absorbing capacity  
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## Another New Power Plant Conserves Heat— Saves Fuel . . .

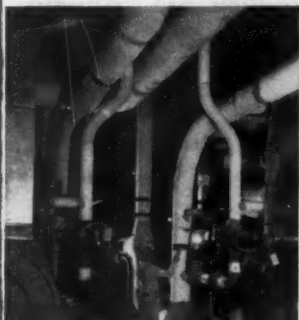
with **Carey**  
**INSULATION**

### Hawthorn Station, Kansas City Power & Light Company

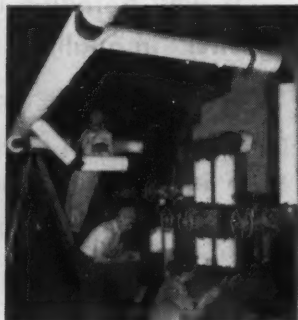
This new steam-electric generating plant pours out a plentiful supply of cheap electricity for fast-growing industry and commerce, and thousands of farms and homes in the Company's Missouri-Kansas service area.

On the Missouri River in the Northeast Industrial District of Kansas City, Missouri, the new, modern Hawthorn Station has two 60/66,000 kw units in operation. An additional 90/99,000 kw reheat unit—to be ready for service late in 1952—will boost the utility's total generating capacity to a figure 103% greater than that of 1941!

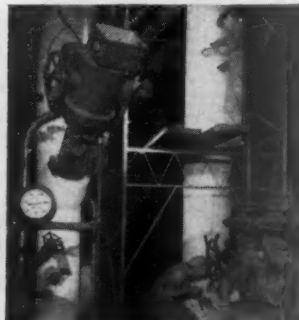
Hawthorn Station, like *hundreds* of leading utility and industrial plants, installed Carey insulation products to save fuel and increase efficiency by minimizing heat loss. You cannot name a heat insulation problem that a Carey insulation product will not solve. And Carey's broad line includes *Super-Light* monolithic 85% magnesia in precision-sized blocks and "nesting O.D." pipe coverings that simplify installation, slash labor costs. Let Carey help you solve your heat insulation problems. Ask your Carey Industrial Sales Engineer for complete technical and application data—or, write to us direct.



Large pipe lines shown are 8" boiler feed discharge lines, carrying hot water from boiler feed pump to boiler drum. They are insulated with 2" thick Carey 85% Magnesia, finished with 8 ounce duck canvas. Small lines are 3" re-circulating pipe lines, carrying water at 270° F., and insulated with 2" thick 85% Magnesia with 8 ounce duck canvas finish.



3", 4" and 6" pipes shown here carry saturated steam at a temperature of 350° F. to air heaters. They are insulated with double standard thickness Carey 85% Magnesia insulation.



The main steam header, carrying steam to the turbine at a temperature of 950° F., is a 12" pipe insulated with 2½" thick Carey Super-Light Monolithic 85% Magnesia over 2½" thick Carey Tempchek with sewn asbestos cloth finish.

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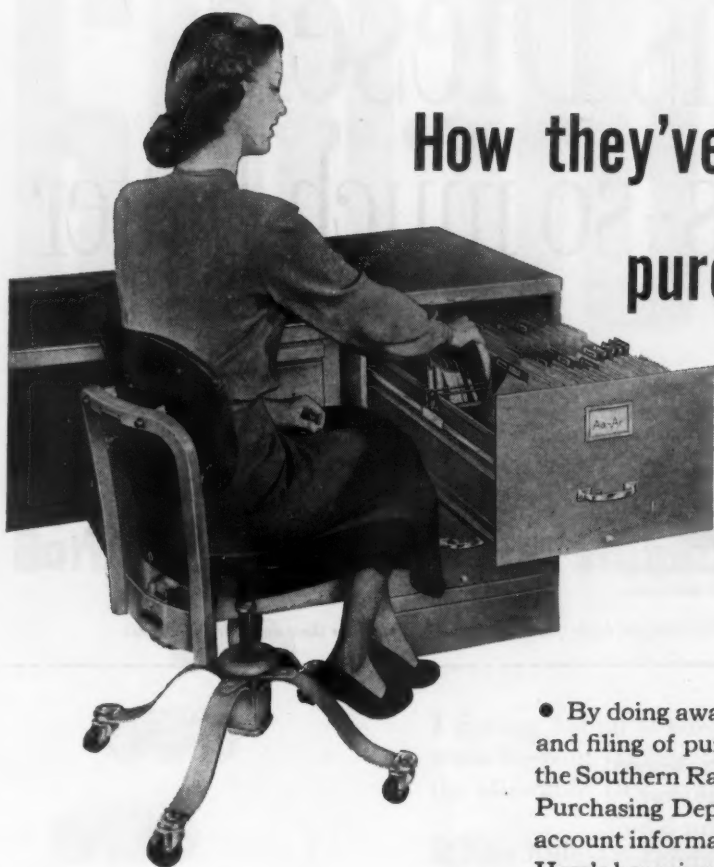
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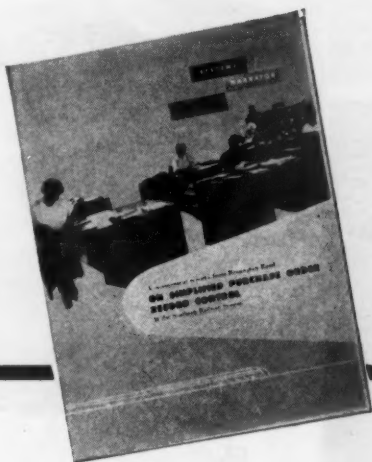


# How they've simplified purchase order paperwork on the **SOUTHERN RAILWAY SYSTEM**

• By doing away with a system that called for the entering in ledgers and filing of purchase orders and invoices in bulky, bound volumes, the Southern Railway System has reduced clerical work hours in their Purchasing Department more than 35%. Also, they've made vendor account information much more easily accessible for executive review. Here's how simply their new system operates:

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The money saved by Southern through not having to bind their orders will pay for their new, efficient equipment in a short time. But their greatest gain is a smoothly operating purchase order routine under close administrative control.



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Please furnish free copy of "Simplified Purchase Order Control" (SN 768).

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Lightweight, high-speed Diesels (50-550 hp) for these and many other uses

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Rugged, lightweight, high-speed Cummins Diesels are at work everywhere. Each engine is built twice. It's assembled, run-in tested, disassembled and inspected, then reassembled and tested again. This extra care in building, plus Cummins exclusive fuel system and an efficient and expanding service and parts organization, means minimum "down time", more power and profits for the user. See your Cummins dealer.



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**Diesel power by  
CUMMINS**

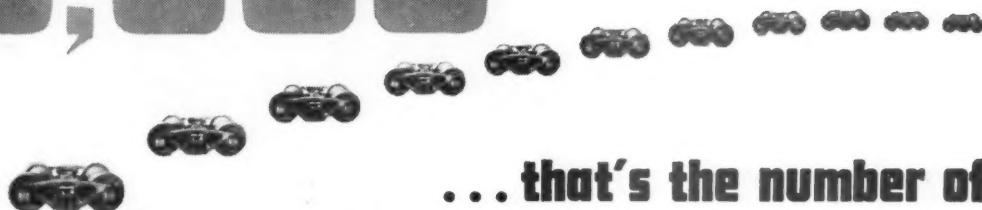
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300,000 CAR SETS

# trucks



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**2** Easy Riding is assured (Variable Friction for Variable loads).

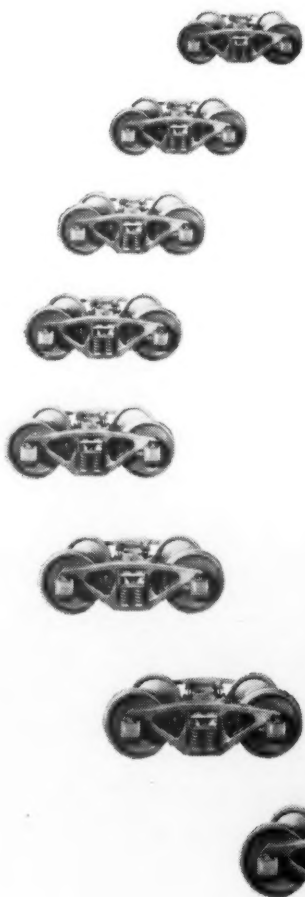
**3** Fine Lateral as well as Vertical Control—provides for Spring Deflections up to  $3\frac{11}{16}$ ".

**4** Part of the load is carried by the Side Springs, thus increasing Bolster-Spring Capacity.

**5** Minimum number of parts.

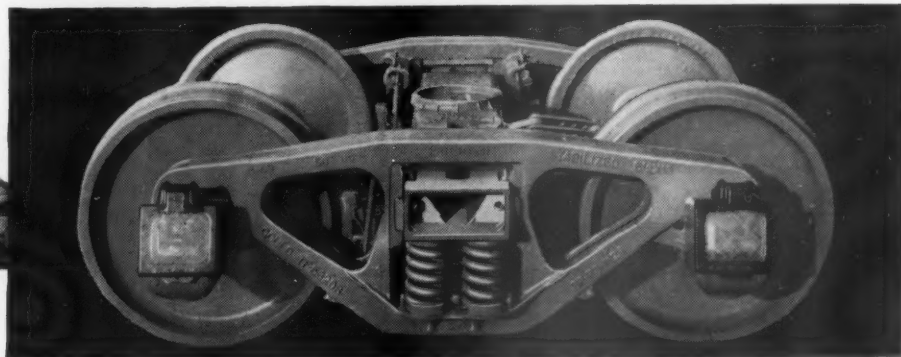
**6** Easy to assemble. Easy to dismantle.

**7** Long life. Up to 10 and 12 years with little or no maintenance cost.



Barber Snubbing Action is VARIABLE—  
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**A.C.F.** Assembly-Line facilities in the production of gondola cars are shown in these selected views.



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And moving millions of tons of freight promptly and efficiently, day after day, is the Railroad's prime responsibility.

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To keep 'backyards' busy...to keep freight rolling in increasing volume...to plan realistically for better earnings...the Railroad must face squarely the problem of an adequate freight car supply.

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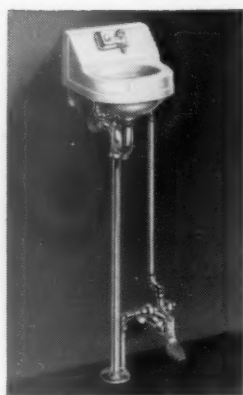




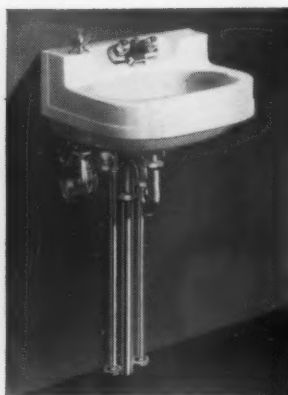
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*the Preferred Plumbing*



Dental lavatory of vitreous china with flushing rim, foot-pedal operated.



Vitreous china lavatory with oval basin, self-closing supply and soap dispenser.

Wall supported closet of vitreous china. Practical—convenient—a space saver.



● The list of feature trains equipped with Crane plumbing reads like a Blue Book of modern railroading. Above are shown some of the roads whose newest trains provide maximum comfort for their passengers—and have plumbing by Crane.

The discriminating American public demands the maximum in style and service. The rough treatment received

by any equipment used by the general public demands that this equipment be of the highest quality. Crane plumbing, because of its high quality, modern styling and ability to withstand abuse, has been the preferred plumbing on all types of trains from work-a-day commuters to lordly streamliners since it was first introduced in the railroad field many years ago.

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	DATA
LUBRICANT	RPM DeLo R.R. Oil
UNIT	Locomotive diesel engines
SERVICE	Freight and passenger
OPERATION	Local and transcontinental
MAINTENANCE	Progressive

## One million miles of service from engine parts!

LUBRICATED WITH RPM DELO R.R. OIL, many diesel engines in the locomotives of U.S. railroads have been in service for long periods without complete overhaul! Many of the liners, pistons, bushings

and other parts in these engines have now been in use for hundreds of thousands of miles. Progressive maintenance inspections indicate that RPM DELO R.R. Oil will keep the parts in service for at least one million miles, the general overhaul period set by some of the railroads.

RPM DELO R.R. Oil keeps parts clean and free of wear-causing lacquer and gum deposits and is not corrosive to engine metals of any kind.



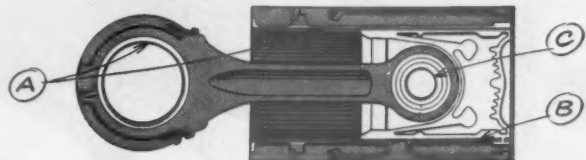
IN OVERLAND MOUNTAINOUS FREIGHT SERVICE for nearly 500,000 miles, this liner, lubricated with RPM DELO R.R. Oil has less than 0.006 inch wear and taper is so minor that it is barely measurable.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any one of the companies listed below.



TRADE MARK "RPM DELO" REG. U.S. PAT. OFF.

### How RPM DELO R.R. Oil prevents wear, corrosion, oxidation



- A. Special additive provides metal-adhesion qualities...keeps oil on parts whether hot or cold, running or idle.
- B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent scuffing of cylinder walls.
- C. Special compounds stop corrosion of any bushing or bearing metals and foaming in crankcase.



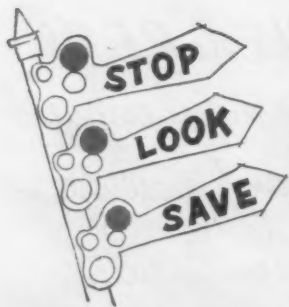
THIS PISTON AND CONNECTING ROD have been in service for more than four years. After picture was taken it was put back in the engine for further use. Note the excellent condition of the rings and bearing. All the rings are free, oil holes open and there are no troublesome deposits in any ring grooves.

STANDARD OIL COMPANY OF CALIFORNIA  
225 Bush Street • San Francisco 20, California

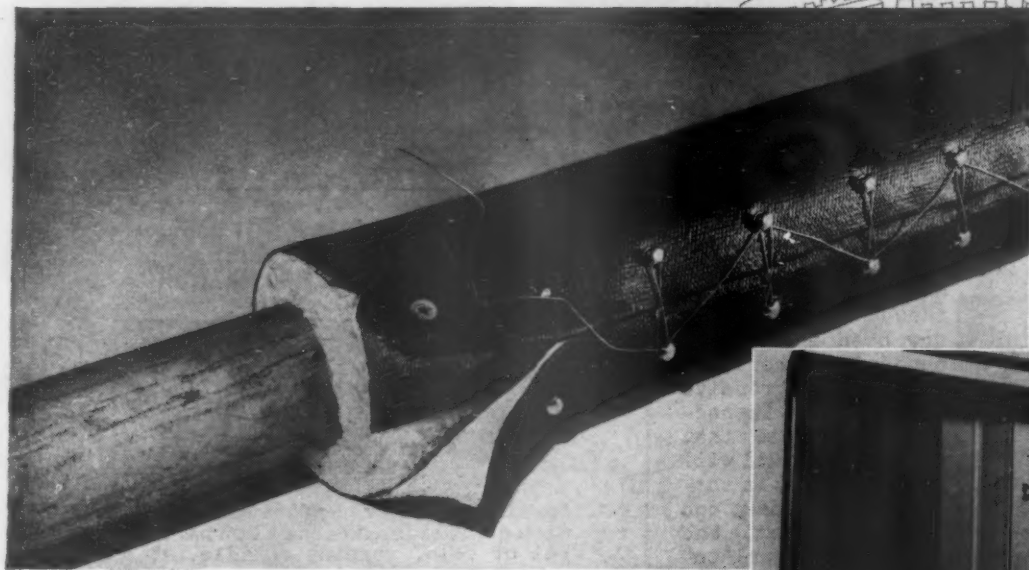
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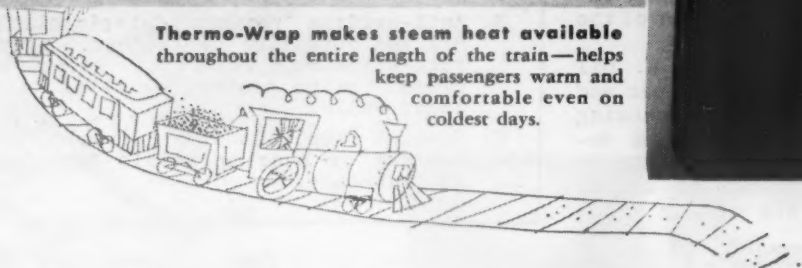




## New J-M Insulation saves heat... helps stop cold-car complaints



Thermo-Wrap is secured to steam pipes with lacing hooks that are properly spaced to facilitate installation. Note double lap at joints to provide a weather-tight seal.



Thermo-Wrap makes steam heat available throughout the entire length of the train—helps keep passengers warm and comfortable even on coldest days.



Cover your car heating lines with Thermo-Wrap, the improved Johns-Manville lace-type insulation, and you'll keep costly heat *inside* the pipes where you want it.

This not only saves fuel—it also helps keep passengers warm and comfortable throughout the length of the train!

Thermo-Wrap owes its exceptional efficiency to an insulating medium of twisted asbestos fibers held together by asbestos yarn, and enclosed in a woven asbestos jacket. Over its entire outside surface, this jacket is coated with a tough, durable, and fire-resistant water-

proof coating to assure maximum protection against abrasion, mechanical abuse and moisture. Even in the most rugged railroad service, Thermo-Wrap stands up under the impact of rain, sleet, snow and flying ballast.

In addition to the fuel-saving serviceability factors, you will find Thermo-Wrap economical to use because it can be quickly and easily applied on straight or curved pipe . . . fits tight and stays tight on the job. For further information, write for Folder IN-132A. Address Johns-Manville, Box 290, New York 16, N. Y. In Canada: 199 Bay Street, Toronto 1, Ontario.



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**93 YEARS OF SERVICE  
TO TRANSPORTATION**



**SAVE STEEL**

# STOP RUST



*With*



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Metals that are rustable are as essential to railroading as the railroads are to the nation—and RUST-OLEUM'S protection against rust extends the useful life of iron and steel economically.

When you use RUST-OLEUM, durable, reliable protection is assured for rolling stock, metal buildings, bridges, towers, signal equipment—adding years to the usefulness of any rustable railroad property.

### **Cut Your Maintenance Cost**

Rescue metal that has already started to rust. RUST-OLEUM can be applied even over metal already rusted—usually without sandblasting or the use of chemical cleaners. Simply scrape and wire brush to remove rust scale and loose rust. Then apply RUST-OLEUM by brush, dip or spray. It stops the rust, and promptly dries to a firm, pliable, rust-resistant protective coating.

It's the practical answer to many of your rust problems. If you have not adopted RUST-OLEUM, arrange a trial. If you have questions or special problems, write us.



Ask for the new catalog of railroad applications, listing the many colors (including white and aluminum).



"Rigid Economy, Men!"

**RUST-OLEUM CORPORATION**  
2583 Oakton Street, Evanston, Illinois





Joe Humenik began his career at Okonite in 1911. Today, his 40 years of skill are part of the vast know-how which goes into every cable. Here, he is applying a braided cover to a 60,000 volt shock-proof X-ray cable developed at Okonite.

• • •

Joe's son Ed, one of the many second generation employees at Okonite, joined the company in 1940, served 4 years in the Navy, now inspects and packages Okonite's famed Manson friction tape.

## THAT ELUSIVE "Something"

Pride in a job well done is all too rare these days. Yet pride in workmanship puts something into a product that neither machine nor material can contribute.

That elusive "something" is an integral part of every Okonite cable. Added to Okonite's premium materials and advanced manufacturing techniques, it spreads the extra margin of quality that tips the balance between a cable that's superior and one that is merely good enough.

Meticulous care in the making of insulated cables contributes heavily to the performance of vital electrical circuits. It has helped to make Okonite cables the outstanding choice for reliability among leading utilities, railroads and heavy industries.

This craftsman's pride in his work is shared by countless Okonite employees. Better than one out of every six have worked here 20 years or more. Many are second, even third generation employees.

They're skilled workmen . . . proud of their jobs and proud of their company. The Okonite Company, Passaic, N. J.

THE BEST CABLE IS YOUR BEST POLICY



insulated wires and cables

### WHO ARE THE PEOPLE THAT NEED "SELLING" BY THE RAILROADS?

The railroads individually and collectively are spending a lot of money and effort to "sell"—not primarily their services, but themselves as useful public servants—to the general public. This effort includes, not just the "public relations" advertising by radio and magazines and newspapers, but also the speechmaking, pageants, pamphlet literature, movies, and countless other such projects among businessmen, farmers, educators, school children and others.

Thus gaining or maintaining the good opinion of people in the mass is certainly not money wasted. With the railroads no longer, relatively, a big factor in the total passenger and package freight business, probably a smaller percentage of Americans has direct contact with railroad service today, than at any time in the past 75 years.

If mass-aimed advertising by radio and in the national magazines were not repeatedly reminding people of the industry's vital national importance, most people probably wouldn't know or care any more about railroads than they do about the corn crop which determines the supply of bacon. As long as they get the bacon they are content to let somebody else do the worrying about such preliminaries as feeding the hogs; and as long as supplies of the goods they want reach them regularly, they will not, unless reminded, attribute any special merit or importance to the people who make the deliveries.

#### Seven Targets

The rather vague good will which is the best that can be expected from mass opinion toward the railroads is needed by the industry, but such favor serves merely a protective purpose. It is not an active force for railroad prosperity. Without a large measure of favorable popular opinion, the railroads would be easy vic-

tims for almost any predatory measure that demagoguery could conjure up. On the other hand, general friendliness to the industry guarantees no positive advantage. It can do little of itself to create railroad prosperity.

It isn't the apathy, greed, ill will or the ignorance of 150 million Americans which have put the railroad industry behind the eight-ball financially or which, being corrected, could end the industry's troubles. The "railroad problem" is not, by its very nature, a problem for the "man in the street" to handle. For one thing, it is much too complex for him to comprehend; and, even if he did comprehend it, he hasn't enough say-so or know-how to do anything much about it.

The people who *could* solve the problem are numbered in the thousands rather than in the tens of millions. They could solve the problem, because they are the ones who have created it. And who are they? They include—

(1) The shippers who have diverted their traffic, by the attraction of subsidies and unequal regulation, to inherently costlier agencies of transportation and who are doing nothing to terminate such subsidies and unequal regulation;

(2) the automotive and allied interests who campaign for more and bigger superhighways while doing nothing to minimize the overloads which destroy the highways, and who neglect to suggest that users and not general taxpayers should pay all the costs of roads in the same way that movie-goers pay all the costs of movie entertainment;

(3) the big industries which send their freight by the inland waterways, and, with uneasy consciences, defend the toll-free status of these waterways;

(4) the economists, teachers, regulators and legislators who put transportation policy into words, legislation, and regulatory decisions—and many of whom are inadequately and inaccurately informed;



(5) the financial community, which has much more power in the premises than it has yet seen fit to exercise in the long-run public interest;

(6) the union leaders, responsible for many inhibitions to efficient railroad service, which are lethal in a period of intense competition; and

(7) the leaders responsible for national defense and who know the importance of the railroads to their endeavors, but who have done relatively little actively to foster the conditions which make for good railroading.

### **Selling by Service**

The foregoing seven categories are typical of those of the people who have really effective power over the future of the railroads—and who hold in their hands the decision favoring either socialism or freedom for the country's future. No "selling" job in behalf of the railroads which does not include intensive effort aimed at these "key" people is realistic or likely to achieve success. Each of these groups can be appealed to, honestly, in its own selfish interest, as well as in that of the nation as a whole. But the interests of these groups differ. The "message" which will win one group will not often even register with the others. A general message of institutional good will, aimed at 150,000,000 Americans, will not, probably, hit home with any of these really important decision-making people. Perhaps the one approach which would most deeply impress all seven groups is *as near perfect service to customers as it is within the means of the railroad industry to give.*

It is to serve and advance this last-named goal that this paper has been issuing each month its series of "freight traffic issues"—which have the dual purpose (1) of publicizing among shippers and throughout the railroad fraternity each worth-while improvement in service and facilities being made by the railroads individually or collectively, and (2) developing "customer-mindedness" and "freight-traffic-mindedness" on the part of all railroad men. The constantly increasing favorable response this effort is receiving, from shippers and railroad men alike, is conclusive evidence to us that this specialized endeavor is both worth-while and effective.

The railroads have a story of general interest to tell which they have told, and are telling, very well. There yet remains to be done the kind of intensified sales effort which would have to be "hand-tailored" to harmonize with the particular interests of financial people, the scholarly inclined, the leaders of specific businesses, union labor, and other such specialized groups. It is with a few thousand leaders in fields whose interests in transportation are more than casual that the solution of the "railroad problem" ultimately lies. The technique of "selling" a mass market is quite different from that of "selling" a small number of specialized fields. The railroads have a lot of experience with the first kind of selling. They have tried their hands very little at the second kind.

## **WILL THIS QUESTION BE SETTLED BY DEFAULT?**

A letter from a reader published elsewhere in this issue raises a subject of growing importance to every railroad and to the men whose future is closely tied to a policy of railroad management affecting the mechanical department, namely, that of apprentices, and who should be responsible for their training.

The railroads have been inclined to look upon apprentice training as something of minor importance—with much the same indifference with which some parents view the education of their children. The result has been that the railroads are feeling the pinch of a shortage of the right kind of manpower for supervisory and management jobs.

The apprentice boy of today is not just a "bottom-level" employee who "has to be sent to school to keep him out of mischief" and promptly forgotten by management. He is an extremely important cog in the railroad machine. Who trains him and how he is trained will determine the kind of supervisors and general officers the company will have 15 to 25 years from now.

We have all witnessed the ever widening path of the intrusion of the federal government and organized labor into local affairs. The manner in which this has affected the railroads is becoming more evident each passing year. Some of our largest railroad systems have been faced with the demand that the shop crafts organizations be accorded a more influential position in the selection of apprentices and the manner of their training.

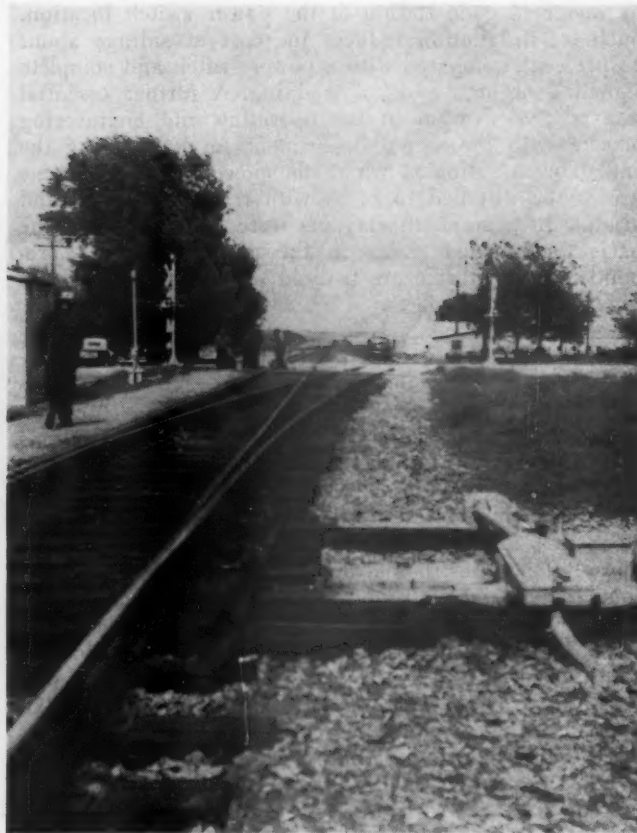
As the writer of the letter referred to indicates, there may not be too much difference between the efforts of a government bureau and of a labor organization in their influence on the railroads with respect to the mechanical department apprentice.

A railroad company's apprentice system is, or should be, designed to fill out the ranks of skilled craftsmen and provide company-trained men for supervisors and, ultimately, for general officers. A railroad's supervisors have long been looked upon as part of management but it is now clearly evident that management, in many cases, has not done too good a job of making its supervisors feel that they are part of management. The training of employees is, as the writer suggests, a prerogative of management. If management is not far-sighted enough to realize that what has been considered by some a relatively unimportant segment of its employee group, namely, apprentices, is a pool from which future officers must be drawn, and that apprentices be trained to that end, then there should be no complaints as to the type of men that may come out of this pool or of their attitude towards the company.

This is a matter of policy that cannot be sidestepped. Either the railroads are going to educate their future leaders or some other agency is going to do it for them, with objectives not necessarily in the best interests of the industry.



Ordinarily trains enter the sidings at the power switch end



Trains depart from sidings at the spring switch end

## How the Burlington Simplified C. T. C. For Light-Traffic Single Track

On a 238-mile line which ordinarily has 9 to 15 trains daily, the first cost of centralized traffic control was reduced by installing a power switch and controlled signals at only one end of each siding, with a spring switch at the other end, rather than following conventional practice of a power switch at both ends

A simplified arrangement of centralized traffic control, designed to reduce first costs in proportion to the requirements of comparatively light traffic, has been developed and installed on the Chicago, Burlington & Quincy on 238 miles of single-track main line between Ravenna, Neb., and Alliance, on the route between Chicago and Billings, Mont., via Omaha and Lincoln.

Previously no signaling was in service on this Ravenna-Alliance territory. The siding switches were hand-thrown and the train movements were authorized by timetable and train orders. Some form of track-circuit-controlled signaling was desired. Experience with conventional

automatic block signaling on the Burlington showed that while this form of signaling gives protection, it necessitates continued use of timetables and train orders to authorize train movements. On the other hand, the practice of authorizing train movements by signal indication in centralized traffic control territories on the Burlington had proved to be a means of saving train time, increasing track capacity, and improving the safety of train operations. Thus, an objective of cooperative studies on the Burlington was to adopt a form of centralized traffic control simplified to meet the needs of comparatively light traffic, and by this simplification to reduce the equipment involved, so that the cost would be not much more than conventional automatic block. Such an expenditure was considered to be justified for signaling in this territory.

The major reduction in cost was accomplished by installing a power switch machine and C.T.C.-controlled signals at one end of sidings, and a spring switch and two controlled signals at the other end. The power switch, the signals at this switch and also the signals to enter or depart from the spring switch end, are all controlled



by one field code station at the power switch location. Such an installation reduces the cost at sidings about 35 per cent, compared with a power switch and complete signaling at both ends of a siding. A further essential was the cooperation of the operating and engineering officers with the signal department in determining the end of each siding at which the power switch machine was to be installed to fit in with train operations and grades. In general, the layouts were determined on the basis that loaded trains in the direction of the preponderance of traffic are to hold the main, and lose no time waiting for meets.

#### Nine to Fifteen Trains Daily

Scheduled traffic in the Ravenna-Alliance territory includes four passenger trains and four through freights daily, with a local freight three days each week. An extra train, mostly loaded oil cars, is operated eastbound nearly every day. During autumn months, extra trains of loaded stock cars are operated eastbound, as many as four or more such trains being operated on some days. The four time freights are operated by diesel locomotives, and the other trains by steam locomotives.

Except for a few breaks, the grade ascends gradually westward from an elevation of 2,000 ft. at Ravenna to 2,972 ft. at Seneca, and to 4,000 ft. at Alliance. The maximum ascending grade westbound is 0.6 per cent. Eastward the grade is descending gradually, except for about 4 miles of 0.5 per cent ascending grade eastward just east of Halsey. This is the ruling grade eastbound, but it does not limit tonnage. The length of sidings limits the number of cars in a train, and this indirectly limits tonnage rather than the grades. This is true for both

eastbound and westbound trains. The maximum permissible speed is 65 m.p.h. for passenger trains and 50 m.p.h. for freight trains. The locomotive can handle trains consistently at these speeds in either direction.

#### Nine Sidings Discontinued

The preponderance of loaded car movement is eastward, including agricultural products, live stock, oil and lumber. Westward traffic includes merchandise and manufactured products, and empty tank cars and stock cars. Eastbound trains, consisting mostly of loaded cars, are given preference, this being an important phase of operation which entered into consideration of the layout of the C.T.C.

Previous experience on other parts of the Burlington showed that, with C.T.C., fewer sidings are needed. Because much of the cost of C.T.C. is for equipment at sidings, a program of revisions of sidings was planned and completed before installing the new signal system. Sidings at Litchfield, Mason, Berwyn, Dunning, Natick, Kelso and Lakeside were left in place, some being shortened for use as storage or business tracks, not to be equipped with C.T.C. control. Sidings at Wier and Duluth were removed. A new 130-car siding was constructed at Gavin, midway between Litchfield and Mason where sidings were discontinued. The net result is that there are now on this line 22 sidings equipped with C.T.C. control, as compared with 31 sidings previously used by meeting and passing trains.

Sidings not already long enough were lengthened; capacity varies from 128 to 158 cars. In all the siding changes and additions, 40,086 ft. of track were removed and 37,048 ft. installed. There are short spurs, house

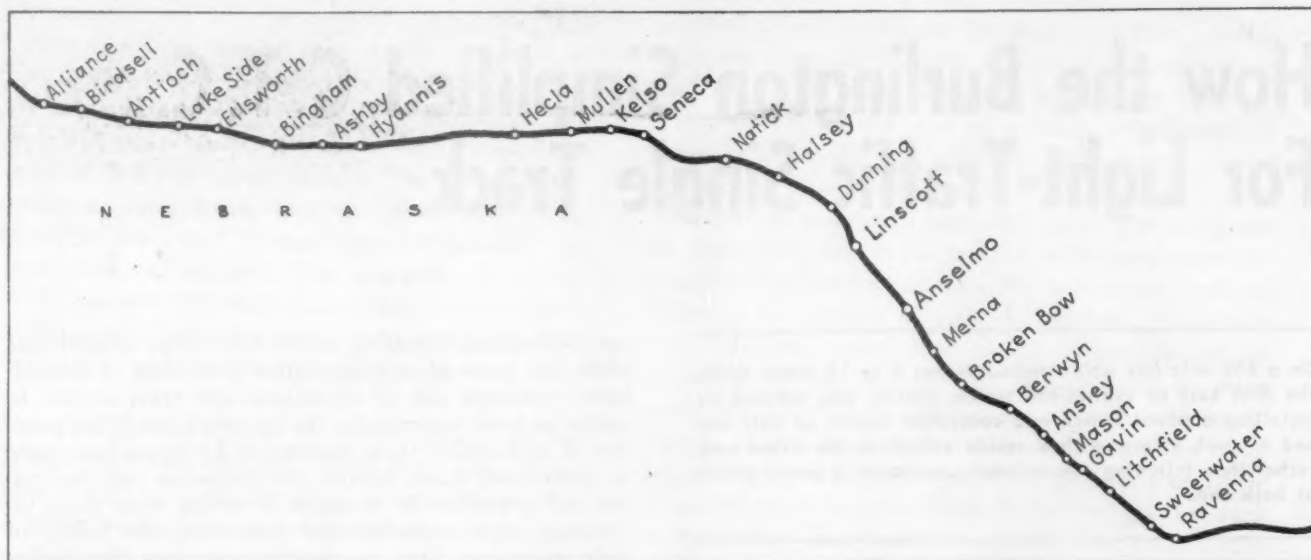


Fig. 1—Location of sidings in the C.T.C. territory

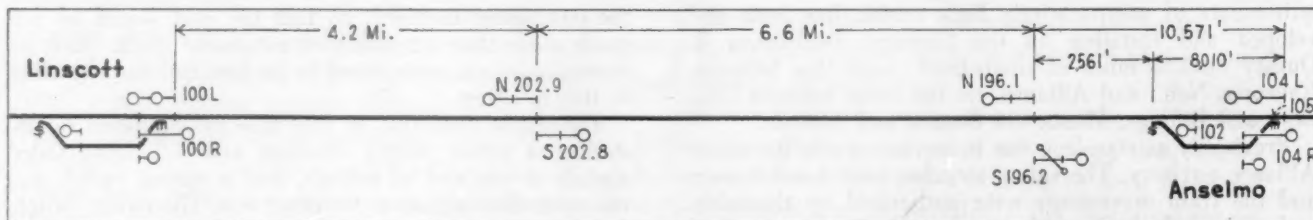


Fig. 2—Typical signaling arrangement at power switches and spring switches

tracks and stock pen tracks at all the towns. The hand-throw stands at these main-track switches were left in service, and electric locks were added as part of the C.T.C. system, a total of 44 switches being so equipped.

### Power or Spring Switch

Power switch machines and the complete arrangement of C.T.C.-controlled signals were installed at both ends of the terminals at Ravenna and Alliance, as well as at Seneca, which is the midpoint where freight trains change crews. Power switches were installed at both ends of Broken Bow, so that trains in either direction may enter the siding without stopping. This is a heavy switching district, and such an arrangement permits switching to continue without delay to main-line movements. Between Ravenna and Alliance there are 18 sidings at which there is a power switch and complete C.T.C.-controlled signaling at one end, with a spring switch at the other end. At 15 of these 18 layouts, the power switch is at the east end, while at 3 sidings it is at the west end.

In general the power switch is at the east end rather than the west, so that the dispatcher can reverse it to head a westbound train in to wait on the siding for a meet with an eastbound train which holds the main and passes without stopping. This procedure is planned on the basis of preponderance of tonnage eastbound.

Contrary to this general practice, the power switches at Norway (the first siding east of the intermediate terminal at Seneca) and at Antioch and Ellsworth (the first two sidings east of the terminal at Alliance) are at the west end of the sidings because this location gives the dispatcher a better chance to get eastbound trains out of the respective terminals on short time, and helps keep the yard clear for arriving trains. At Alliance the C.T.C. project includes power switches and signals at the east end yard entrance switch, and, at the west end of the yard, two crossovers and signals at a junction of two lines—one west to Billings and the other south to Denver.

### Signaling Arrangement

At each of the power switches at the end of sidings, there is a standard arrangement of signals to direct trains to (1) continue on main track; (2) enter the siding; (3) leave the siding; or (4) stop. At the spring switch end, there is a dwarf signal to direct a train on the siding to depart. This move is made by trailing out through the spring switch, and no stop is required for trainmen to move the switch.

While trains usually enter a siding at the power switch end and depart at the spring switch end, signaling is arranged to direct a train to enter a siding at the spring switch end if the dispatcher decides that train time can be thus saved—as shown in Fig. 2. When the dispatcher decides that an eastbound train is to be directed to enter the siding at Anselmo, for example, he sends out a control code that causes eastward Signal S196.2 to display an aspect of “red over two lunar lights”; the latter are 3 ft. apart in a line at an angle of 45 degrees. At the same time, the next signal in approach, S202.8, displays a yellow aspect. These aspects direct an eastbound train to stop just short of the switch at the west end of Anselmo.

Then the head brakeman reverses the switch by the hand-throw stand so the train may enter the siding. After it is in the clear, the brakeman places the switch normal.

The overall station-to-station block is from one power



As an unusual move, a train can be directed to enter a siding at the spring switch end. In this event, the approach signal displays red over two lunar white lights at 45 degrees

switch layout to the next, insofar as opposing train moves are concerned. Intermediate signals permit two or more trains of the same direction to follow in the same station-to-station block. As shown in Fig. 2, Signal S-196.2 was placed far enough west to make the block between it and eastward Signal 104R 10,571 ft. in length, or slightly more than the standard “automatic” block in three-aspect territory, providing a considerable margin above train stopping distance. Westward intermediate Signal N202.9 is about 4.2 miles from westward station entering Signal 100L at the east end of Linscott. This leaves 6.6 miles for the intermediate block between Signals N196.1 and N202.9. As a general rule, at intermediate locations there is a signal for each direction.

### The C.T.C. Control Machine

The C.T.C. control machine in the dispatcher's office has one center panel 5 ft. 10 in. long, and two wing sections each 6 ft. 2 in. long—totaling 18 ft. 2 in. in length. This machine has 27 levers for control of power switches, 18 levers corresponding with spring switches, 50 levers for control of signals, and 17 levers for control of electric locks at hand-throw switches. The track dia-





This machine in the dispatcher's office controls 238 miles of C.T.C.

gram includes lamps which indicate the location and progress of trains on the main track.

When the dispatcher sends out a control to clear a signal for a station-to-station train movement, a lamp is lighted above the corresponding section of the track diagram to indicate the direction of traffic established. Below each code-starting button is a yellow indication lamp which is lighted when electric locking is in effect so that operating the button would be fruitless. Time locking is used, based on 30 sec. for each 1,000 ft. of track involved. An automatic pen-type recorder, with 84 pens, installed in the top of the desk, makes a record of all train movements on the 238-mile line.

#### Benefits of C.T.C.

The C.T.C. is saving train time. For example, passenger trains No. 42 and No. 43 are scheduled to meet at Gavin about 2:24 a.m., and eastbound time freight No. 80 is usually in that vicinity. Westbound time freight No. 79 is due to leave Ravenna at 12:30 a.m. When train movements were authorized by timetable and train orders, numerous delays were encountered by these four trains in the area between Ravenna and Seneca. In many instances, the best solution used to be to hold westbound freight No. 79 at Ravenna—which meant a delay of an hour or more. According to studies made by the division superintendent, the C.T.C. normally saves about 1 hour for No. 79 and 45 minutes for No. 80, as well as 45 minutes for eastward passenger train No. 44, and 5 to 10 minutes for westward passenger train No. 43. Extra trains save more than an hour.

With C.T.C., an illuminated track diagram shows the dispatcher the location of and progress being made by trains. Therefore, he can control signals to direct trains to keep moving as required to make meets on close time. For example, on a recent day, the dispatcher of this territory figured that two trains would meet at Merna. However, the eastbound train was delayed by a hot-box. Seeing the situation on his illuminated diagram, the dispatcher controlled the signals to keep the westbound

train moving beyond Merna to Linscott, thus saving at least one hour for that train. Situations such as this occur repeatedly, and all add up to hours of train time saved.

An interesting feature of the project is the use of normally deenergized reversible coded track circuits, in the station-to-station blocks. Basic features of this system are explained in the November *Railway Signaling & Communications*. This centralized traffic control was planned and installed by Burlington signal forces under the direction of A. L. Essman, chief signal engineer. The major items of equipment were furnished by the General Railway Signal Company.

#### TRAINMEN VIEW THE "HIGHWAY CRISIS"

In newspaper advertisements, the Goodyear Tire & Rubber Company declares "We Must Face the Highway Crisis Now." The solution to congestion on American highways, says Goodyear, "is not the number of cars or the size of trucks—it is too few modern roads!"

Of course, Goodyear and other rubber companies now urging expenditure of billions of dollars of taxpayers' money for highways make tires for the trucks that congest them.

If public money and favor are to be used to build unneeded duplicate carriers, then the public must pay twice—first to construct and maintain the duplicate carriers and again to absorb additional rates on the traffic left to the railroads to compensate them for the revenue loss. Otherwise, the railroads must be operated by public subsidy, like their competitors.

Shifting the traffic load from the highways to the railroads is the most economical and effective method of ending the congestion and slaughter on the highways that now have become serious problems in this country.—An editorial in "Trainman News," weekly publication of the Brotherhood of Railroad Trainmen.

# How "Wall Street" Looks At the Railroad Problem

By WALTER F. HAHN

Railroad Security Analyst  
Smith, Barney & Co.

In many respects the railroad industry as a whole is today in the best physical and financial shape in its long history of accomplishment. Yet, anyone who reads the papers knows that there is still a railroad problem. This is happening in a period of general prosperity and after the reorganizations of the past 15 years which were calculated to solve and end the railroad problem and make the railroads depression proof.

What's this all about? Is there a railroad problem of consequence or isn't there? The answer of course, is both "yes" and "no," depending on which railroad you're talking about.

## Earnings Only Appear to Be Good

Although Class I earnings are superficially good, particularly in the eyes of the Interstate Commerce Commission, they are bad at least in three important respects. The total is no longer divided as it used to be. Some railroads are getting too much of the pie, others too little. The earnings are also bad in the sense that one dollar today buys less than half what it bought 10 years ago—especially important at a time when capital expenditures are running around \$1½ billion a year.

The earnings are bad, too, in the sense that numerous railroads cannot earn enough in a period of prosperity to do the things they ought to be doing.

In the 10 years ended 1950 United States railroads earned more than in any previous decade. Dividend policies were conservative. Not all of the interest accrued was paid to bondholders. Retained earnings were tremendous.

Retained Earnings (in Millions)			
	1941-1950	1931-1940	1921-1930
Net income .....	\$6,260	\$ 404	\$6,187
Dividends .....	2,427	1,484	3,758
Retained earnings .....	3,833	D 1,080*	2,429

\* Cash drain was not as severe as indicated as a large part of the bond interest accrued by bankrupt railroads was not paid to bondholders.

Except for the war and early postwar years, 1943 to 1948, inclusive, working capital of the railroads is at the highest level in the 110 years of railroad history—recently about \$1.4 billion.

Railroad earnings this year, although lower than last year, will be about as high as the average of any previous decade and will have been exceeded in no more than 10 out of the past 110 years. Net income of Class I railroads this year will probably be around \$600 million, compared with an average of \$626 million in the forties, \$619 million in the twenties and only \$40 million in the thirties.

Capital expenditures are running at a record rate. Close to 150,000 freight cars are on order and diesel-electric locomotives are being bought as fast as they

This article is adapted, with abridgements, from a paper presented by the author November 1, at the meeting in Palm Beach, Fla., of the Treasury Division of the Association of American Railroads. Other proceedings at this meeting are reported in another article in this issue, page 54.

can be manufactured. Although there is room for considerable improvement, the railroad property of this country as a whole is probably in the best physical condition in its history.

Measured in ton-miles, traffic volume in 1951 will probably be the highest for all previous years except for the three war years, 1943, 1944 and 1945. Freight rates are higher than ever before.

Few, if any, railroads this year will not earn their fixed and contingent charges. In many cases earnings per share of common stock will be between \$10 and \$20.

Total railroad debt is now less than \$9 billion. Equipment obligations total about \$2 billion and contingent interest debt about \$1 billion. Against this there is a stated investment of \$27 billion. Debt now outstanding is the lowest in 30 to 40 years and railroad investment the highest ever.

Fixed charges have been pared down to the lowest level in about 40 years, due to the reduced volume of debt and to large refunding operations, which substituted low coupon bonds for issues with higher interest rates. Annual fixed charges are gradually getting down to \$400 million compared with close to \$700 million 20 years ago.

Many railroads have been doing extremely well and, pending considerable change in railroad economics, will continue to do well. But not all are doing well—that is, from the standpoints of (1) paying for needed improvements especially urgent at this time; (2) laying up some cash for a rainy day; (3) paying their stockholders anything like a reasonable return on the investment; and (4) establishing their credit on a sound basis so that debt maturities have a good chance of being met without strain or recourse to the courts.

In short, despite the satisfactory earnings of some railroad companies, others are in difficult straits. The positions of the latter are all the more alarming as the recent business background has been extremely good. What will happen to the railroads that are not earning enough today, if later on traffic should be at a lower level?

To solve this problem requires an understanding of what developments produced the problem. Three-quarters of the cure is correct diagnosis of the illness.

Apart from managerial differences—there are inequalities but I don't think they are necessarily indicated by the net income results—today's railroad problem of insufficient net income for some companies has to do largely with developments of the past 10 years. The most important of these have been (1) great variations in traffic and revenues trends of the various railroads; (2) increase in wages and other operating expenses offset only partially by increased passenger fares and



freight rates; and (3) increase in the prices the railroads must pay for replacement of worn out or obsolete property and improvements.

### Revenues Growth Index to Profits

Differences in revenues growth of American railroads have been much greater than is generally realized. For example, in 1950 the Seaboard Air Line had total operating revenues of \$136 million, compared with average revenues of \$40 million in the five years 1935-39, an increase of 240 per cent. The Lehigh Valley, on the other hand, had 1950 operating revenues of \$71 million, only 58 per cent higher than the 1935 average of \$45 million. No wonder Seaboard's net increased much more than the Lehigh Valley's—from \$9 million for Seaboard in 1940 to \$37 million in 1950; from \$14 million for Lehigh Valley in 1940 to \$16 million in 1950.

Differences such as these have been numerous and in large measure have been due to great differences in the rates of revenues growth. Talk all you will about the difficulties of passenger operation, head-end service, short haul and terminal expense—to a very large extent the different rates of revenues growth that have occurred since the late 1930's have been responsible for the wide differences in the earnings results of the various railroads.

### Population Gains Vary Widely

Where a railroad is located, rather than the type of traffic handled, has mainly determined the rate of growth of its revenues. Census figures for 1950 show that the eastern states' population in the last 10 years gained 10 per cent, the South 13 per cent and the West 41 per cent. The railroads have had these varied population rates of growth reflected in their revenues. Using average revenues for the five years 1935-39 as a base, Seaboard Air Line in 1950 had an index of 340—that means 1950 revenues 3.4 times the 1935-39 average. Santa Fe's revenues index last year was 335; Cotton Belt, 325; Kansas City Southern, 312; Union Pacific, 305; Atlantic Coast Line, 301; Southern Pacific, 296; Northern Pacific, 277; Nickel Plate, 274; Great Northern, 260; Frisco, 258; Illinois Central, 255; Denver & Rio Grande Western, 247; and the average for Class I railroads, 246. Not all railroads were so fortunate, for various reasons. New York Central and Pennsylvania had 1950 revenue indices of only 227; Chicago & North Western, 217; Erie, 211; New York, New Haven & Hartford, 195; Boston & Maine, 188; Delaware, Lackawanna & Western, 172; and Lehigh Valley, 159. Thus, some had revenues three and a half times, others only one and one-half times, 1935-39. Which one makes a tremendous difference.

Railroad success in the postwar period has been largely a matter of the degree of growth. Railroads with 1950 revenue indices of 300 to 350 had an average margin of safety for fixed charges of 24 per cent. Railroads with revenue indices of 250 to 300 had an average margin of safety of 19 per cent. The next group, 200 to

250, had a margin of safety of 15 per cent, and the last group, 150 to 200, had a margin of safety of 12 per cent. This is right down the ladder according to growth.

Also to be noted is that operating efficiency, as measured by transportation ratio, and net operating revenues also changed between 1940 and 1950 in line with the growth of revenues.

The changes in earnings relationships that the railroads have been experiencing are so large, so new and so different from the past that nothing much has been done about them yet. But something is going to be done. It has to be done, otherwise we may wind up with the worst railroad mess this country has ever witnessed. We shall see action taken to equalize this situation—action other than granting slightly larger rate increases for the East than the South and West, or changes in divisions.

Differences in the rates of growth of the various companies, wide as they are, do not alone account for the tremendous changes in the positions of individual companies. Inflation, too, has played a very important part. Inflation has affected the fortunes of all of the railroads, but in a very unequal manner.

Differences in the growth rates of American railroads are one of the factors accounting for differences in operating efficiency. A railroad 10 years ago may have been suffering severely from some basically adverse operating factors—such as too little traffic, unprofitable passenger and head-end traffic, or short haul and attendant relatively high terminal expense. This railroad 10 years ago was not earning much. Then it experienced 10 years of exceptional growth. The difficulties tended to disappear. Operating efficiency improved. Transportation and operating ratios dropped to relatively low levels. Growth effected a cure.

### Effects of Inflation Vary Greatly

Another railroad, operating in a different region, may have had similar troubles 10 years ago. But between 1940 and 1950 its traffic and revenues increased only moderately, i.e., much less than average and very much less than the first railroad. As a result its efficiency did not improve much. Unlike the railroad with the large revenues growth its transportation and operating ratios stayed high.

These two situations are typical of a considerable number of railroads. With inflation, what actually happened was that the adverse effect of increased operating costs was not serious for the company with the large growth, because the increase in revenues produced by higher rates was extraordinarily large. But for the company with the small growth factor and no great improvement in basic efficiency, the increase in its costs was very much greater than the increase in revenues produced by higher rates. Inflation hurt it and hurt it severely.

In brief, the big growth company had an efficiency created for it by the growth. This enabled it to absorb the inflation. Not so with the small growth company. Here, operating costs were increased much more by the inflation of wages and other costs than operating revenues were increased by higher rates. On balance it lost out.

These facts raise some mighty pertinent questions. Suppose we have some more inflation. Suppose the railroads have a 50 per cent increase in wages and a 25 per cent increase in freight rates and passenger fares, which for the industry would about offset one another. Let's assume that the other costs would not increase—which is not to be expected. Under such circumstances the low cost operations will presumably do at least fairly

Large railroads with revenues index of: (1935-39=100)	1950 Fixed Charges		Increase in net operating revenues % 1940-50	Transportation ratio %	
	Times earned	Margin of safety %		1950	1940
	Average for group				
300 - 350	14	24	250	32	34
250 - 300	6	19	152	35	35
200 - 250	6	15	54	38	36
150 - 200	7	12	29	40	37

well. But what of the high cost operations? Further inflation may ruin them.

Under these conditions Road A, a poor growth, high cost operation, with a 1950 wage ratio of 55 per cent, would experience a wage increase of \$51.9 million and an increase in revenue of \$47.2 million. The difference of \$4.7 million would reduce pretax earnings by \$5.70 per share of common stock. Road B, on the other hand, a strong growth, low cost operation with a 1950 wage ratio of 35 per cent, would gain \$15.2 million from the rate increase and lose only \$10.7 million from the wage increase. Its net gain would be \$4.5 million, or \$8.80 per common share before income taxes.

That could happen. It has been happening and it could continue. If it does continue, the rich will get richer and the poor will get poorer—unless basic changes occur fundamentally to affect and alter the overall railroad economy.

### Reorganization No Solution

Bankruptcy and reorganization will not solve the problem as in the past. In the reorganizations of the past 30 years, i.e., since the railroads ceased to be a monopoly, net income for many financially embarrassed railroads was created by reducing fixed charges. No longer can serious financial problems, problems caused by absence of net income, be cured by bankruptcy and reduction of debt and fixed charges. The latter are no longer large enough to be a problem or cause a problem. For example, if the Milwaukee's current fixed charges of about \$4 million annually were entirely eliminated, only \$2 million would be added to net income, with the income tax rate at 50 per cent. This \$2 million would be about  $\frac{3}{4}$  of 1 per cent of this road's 1950 revenues of a quarter of a billion dollars. No serious problem of the Milwaukee, if one should occur in the future—and no road is invulnerable—can or will be solved by increasing net income by  $\frac{3}{4}$  of 1 per cent of gross. The old method of solving a problem of insufficient net income is a thing of the past. The pitcher has gone to the well too often.

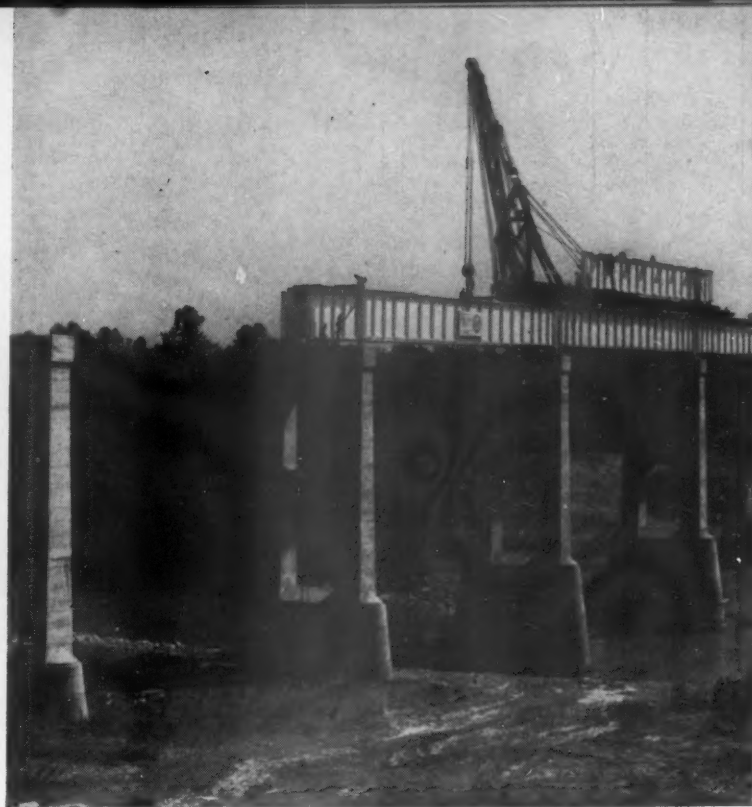
It follows that, if recent economic trends persist—and so far, unfortunately, there is no indication of change—certain railroads lacking growth and the resulting efficiency and ability to absorb inflation of wages and other costs may be faced with financial disaster. Their problems can no longer be solved by reducing or eliminating fixed charges. Fixed charges are too small. The problem has to do with expenses and taxes and their relation to operating revenues.

### Teamwork Called For

What then? If some railroads encounter serious financial difficulties in the next 10 years, government in one way or another will step into the railroad picture. Would it be a case of half slave, half free? I don't know. But I do feel pretty sure that no railroad would be pleased about competing with a subsidized or government owned competitor. The alternative to half slave and half free is all slave. This I hate to contemplate. Imagine the inefficiency, imagine the drain on the taxpayer!

I personally feel that the railroads will have to solve their problem. By this I don't mean only the individual roads solving their own problems, but all of the roads combining in order to solve the problems of the weak and undernourished. There has got to be teamwork as there never was before; if there isn't there won't be a solution to the problem which, in simple terms, is the low level of the earnings of some important railroads.

The prosperous can no longer afford to ignore this



Railroads constantly have to be rebuilt

situation, particularly since it could be aggravated by further inflation or decline in traffic. No longer is it just a simple matter of raising rates.

To sum up:

1. There is a railroad problem and a serious one.
2. It consists of the inadequate earnings of a considerable number of important companies.
3. The problem is all the more serious since these inadequate earnings are appearing when business is at an extremely high level.
4. The inadequate earnings of some roads are the result of many factors, one of the most important of which is less than average growth.
5. The problem can no longer be solved by bankruptcy and reorganization. No large amount of net income can be created by reducing or eliminating fixed charges. Fixed charges are too small.
6. If the problem is not solved, the government will step in. This would affect not only the weak but the strong.
7. Thus, the problem of the weak is increasingly the problem of the strong. An isolationist policy is no longer the correct policy.
8. The railroads together must solve the railroad problem. There is no time for delay. Teamwork is essential as never before; also an entirely new approach to the whole matter of government regulation. Time honored methods may have to go. New thinking of an imaginative quality, unhampered by tradition or precedent, is needed.
9. The prosperous roads must join the indigent in a plan, revolutionary in scope. The problem of the needy must be solved. If it isn't, the strong as well as the weak may have a problem—the problem of keeping out of government hands.
10. Not only must the strong join the weak railroads in a forceful effort to solve the problem of the latter, but both groups must enlist the support of the public and believers in private enterprise. The latter must be educated to realize the possibility of federal ownership of the railroads before it is too late. England has shown that once the railroads go, other industries follow.
11. Each railroad in its own selfish interest must become its brothers' keeper.





Booster units have nearly doubled the size of cuts of cars which 1,000-hp. switchers can handle up the 1.5 per cent lead track to St. Luc's hump. This "cow and calf" unit is

about to couple to a long cut in the receiving yard and shove the cars up to the hump, which is to the right at the end of a 2 deg. 45 min. curve

## C.P.R. "Road Tests" Its First Retarder Yard

*Sixteen months' experience with Montreal's new St. Luc Yard reveals the "bugs" and the remedies*

*Railway Age* is indebted to the Canadian Pacific and its officers who let one of our editors pry into the operations of the new St. Luc Yard at Montreal—and especially for letting us reveal some temporary frailties of the new facility or the methods of using it. It is believed that the story of the eradication of these frailties—however minor—will be useful for other men in the railroad business who will want to make best use, with the least painful transition, of new yard facilities which are now in the building or planning stage.

A full description of the yard and its function, and construction detail, appeared in *Railway Age*, August 12, 1950.

The Canadian Pacific placed in service at Montreal on June 24, 1950, the first hump retarder yard on its system. Called St. Luc, the new yard is at an entirely new location, and displaces Sortin, Outremont, and a portion of Hochelaga yards. Not only is St. Luc the first hump retarder yard on the C.P., it is the first in Canada, and its "push-button" control of switches from the hump into the classification tracks was the first such installation ordered—although second to be completed—on the continent.

With or without prior experience with a facility of this kind and magnitude—three miles long, and designed to handle up to 3,000 cars a day—its initial operation poses a herculean task. It would be nothing short of miraculous if "bugs" did not develop, and if there were not "we wish we had done's" expressed, as its actual operation gets under way. Granted that there were shortcomings, none proved impossible of correction.

First off, there were physical impediments in construction of the layout. A piece of property which it was impossible to acquire necessitated constructing the re-

ceiving yard on a 2 deg. 45 min. curve. The 15 tracks in the receiving yard can accommodate from 53 to 102 cars. The 48 tracks in the classification yard range from 30 to 53 cars in capacity, and the 36 departure yard tracks, with provision made for 10 additional tracks, range from 11 to 104 cars each.

The 15-track receiving yard is adequate under ordinary conditions, but seasonal fluctuations and occasional "bunching" of arrivals has necessitated some holding out of trains, and three additional tracks are contemplated in 1952 to obviate this condition. These will prove especially useful in providing temporary storage for empty cars, so that the loads can be handled ahead of them and the empties switched during the slack periods. A double-track lead from the main line—one track from the west and one from the south, with a crossover at the entrance—has been very helpful in getting trains free of the main tracks promptly.

The classification yard was laid out to provide 48 tracks at 14-foot track centers, but was constructed with only 40. The first year's experience proved beyond a doubt that all 48 were essential to handle efficiently the 80 classifications which are required, and the eight additional tracks were promptly provided.

Trains arrive at St. Luc on the average of one every 24 minutes, with a definite concentration, and shorter interval, between 5:00 p.m. and 5:00 a.m. Sortin Yard (which got its name from the contraction of "sorting" employed by the crews) was to have been closed entirely. To protect the speedy yarding of a few fast freight trains in highly competitive service, which arrived during the period of greatest concentration, it became desirable frequently to class these trains in the old yard. This need now has been met by construction of a modest, five-track flat switching yard within the spacious lateral



Both of the diesels assigned to the hump are equipped with cab signals which make it an easy job to work on the lead track despite the curve. Additionally, they greatly facilitate foggy weather operations. The signal has four aspects which are displayed toward both the engineman and the fireman. The bell at the top rings to call attention audibly to any change in indication

limits of St. Luc. With the exclusive use of the auxiliary facility (which will prove an added blessing in the event of an emergency tie-up on the hump) these important time freights are now whisked through in less than two hours each, and classed *solid* for Windsor, Ont., 577 miles distant. This operation, furthermore, relieves yards at Smiths Falls, Trenton, Toronto and London.

Because the receiving yard is on a curve and visibility is thereby impaired, cab signals, in place of the conventional stationary signal, were installed in the two diesels assigned to humping. Four simple aspects, conveyed by the humpmaster, repeat in the cab—in a position visible to both the engineman and the fireman—"proceed," "proceed at humping speed," "stop," and "back-up." A bell rings to alert the crew whenever the indication is changed. Even if the yard had been built on a tangent, St. Luc's operators would not want to give up the cab signals. They have proved indispensable for operation in foggy weather.

The 1,000-hp. diesels provided for humping proved inadequate for cuts in excess of 65 loads on the 1.5 per cent lead. Two trailing booster units (with traction motors only) were purchased to augment the cab units. They are highly successful, and have increased the maximum capacity to 125 loads. Because the boosters consist only of traction motor trucks, frames, and weight for traction, they are low and do not impede visibility in back-up movements. They can be cut out for operation at speeds above 6 m.p.h.

The original location of the caboose tracks near the head of the departure yard proved unhandy; they were moved to a point directly behind the departure yard, whence the cars can be moved quickly to the rear of outgoing trains. Because most cabooses are assigned, these tracks were constructed with approaches from each end, so that cabooses first in and first out ordinarily will be available without switching.

During the first winter of operation of the new yard, permanent propane storage tanks were not available until midwinter, because of the steel shortage and consequent delay in their being manufactured. Some difficulty was experienced with the gas supply for switch heaters. The value of the switch heaters was vividly

demonstrated by a few failures. Permanent storage tanks with ample capacity are now installed for the coming winter. Snow fighting equipment which used to be stored wherever space was available is now at a fixed location immediately adjacent to the enginehouse departure track where it can be picked up in a minimum of time and without movements on or across working yard tracks.

Although visibility is excellent from the "picture window" hump office, those using it feel that some additional elevation—perhaps even one floor—would facilitate their work. The retarder operator is in a tower 45 feet above ground level, affording an ideal observation of movements. A "stunt" devised by St. Luc forces to aid in switching during heavy fogs is the use of a special 3 in. fusee, which is hung on the rear sill step of each cut going over the hump.

Waybills of incoming trains are dropped off by the conductors at the tower at the entrance of the receiving yard, and are transported to the yard office, 2.2 miles, by a special automobile over a paved intrayard road. A second auto is assigned to take outbound bills from the yard office to the exit of the departure yard. To expedite this handling—and, incidentally, as a long-term economy—installation of a pneumatic tube system is contemplated.

### Can Handle 3,000 Cars

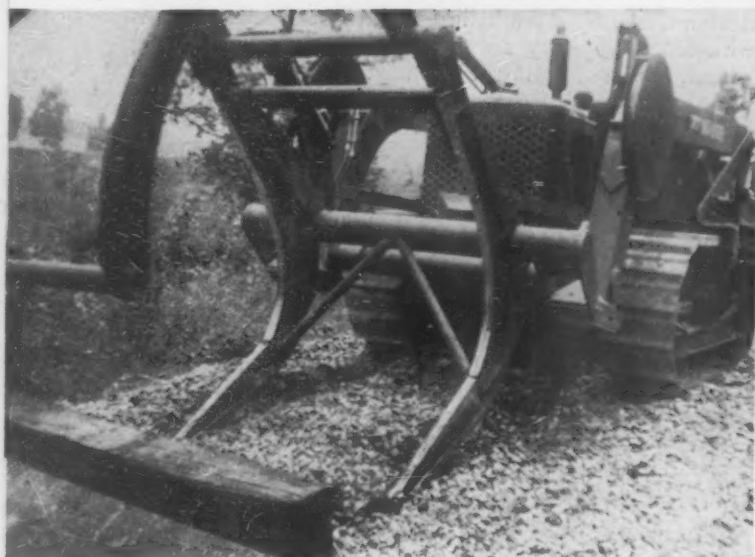
St. Luc Yard was designed to handle a maximum of 3,000 cars (single count) a day. This theoretical maximum has not been reached only because traffic, even though currently exceeding wartime peaks, has not required it. During August 1951, an average of 2,240 cars a day were humped, with a high of 2,461 and a low of 1,786. The all-time high to date has been 2,565, which were handled without difficulty. This traffic was humped in cuts averaging approximately only 1½ cars, a condition brought about by the diversity of origins and destinations of cars handled at Montreal. Experience has demonstrated that the per-car cost at St. Luc diminishes as the total number of cars handled increases, a relation which by no means obtains in flat yards working near capacity. Definite improvement is expected when radio is installed throughout the yard and on all humping engines. Still greater efficiency is contemplated when a talkback communication system, blanketing the three-mile yard, is put in operation, which improvements are scheduled for completion this month.

The consensus of all concerned seems to be that one important mistake made in inaugurating this facility goes back 16 months to the day St. Luc was opened for traffic. Outremont Yard was simultaneously closed, as well as the bulk of operations conducted at Sortin, and their functions were moved, lock, stock and barrel, to the new yard. St. Luc was the first hump-retarder on the Canadian Pacific, and a few days of "dry runs" proved no substitute for actual experience. The first few days were "pretty rough," due not to any inadequacy in the physical plant, but to the lack of in-service training for the three tricks of forces which had to use it. The C.P.R.'s hearty recommendation is that any like move in the future be made gradually.

Overall, St. Luc has proved a complete success, and is now considered quite indispensable to the efficient and expeditious handling of today's volume of traffic. The feature of push-button control of switches, with which no difficulty—outside of the initial training of the operators—has been experienced, has been found to be very satisfactory.

\*Described in *Railway Age* of June 25, 1951, page 83.





**ROOTER-UPPER**—This is a modified Drott skid loader mounted on an International TD-14 tractor. The business end has plow shoes below for routing the cross-ties out of their beds, while the curved upper fork rolls them into a bundle



**UP THEY COME**—The ties were scooped up and shaken free of loose material to form bundles of 20 to 30 ties, depending on their sizes. The upper structural steel girder arms were strengthened with welded tubular stiffeners

## ***Salvage Job Made Easy...***

# **Machines Recover Old Ties and Ballast**

***A substantial amount of much-needed material is recovered by the Southern from abandoned second main track***

In this period of steel shortages, the taking up of 66 miles of second main track on parts of the Alabama Great Southern division of the Southern proved a bonanza for the road's stores and maintenance-of-way departments because it provided a large amount of good second-hand rail and fastenings, which were picked up and loaded with conventional equipment.

The railroad also wanted to recover the 180,000 usable cross-ties and the more than 100,000 cu. yd. of good slag ballast in the abandoned track for use in the new Ernest Norris yard under construction at Birmingham, Ala. This question arose: Since there was no "ready-made" mechanical equipment available for this purpose, how could the material be recovered at a cost that would justify the operation? A committee assigned from the road's engineering department to study this problem came up with the answer by adapting existing equipment, modified as necessary, to the special tasks involved.

The retirement of the second main track was brought about by the installation of centralized traffic control on the A.G.S. division, and was comprised of three sections. One section, 22 miles long, extends from Minvale, Ala., to Flanders; another section, about 21 miles long, from Burstall, Ala., to Vance; and the third section, 23 miles

long, from York, Ala., to a point near Meridian, Miss.

To recover the cross-ties, the committee looked for a machine that would root the ties out of their beds and fasten them in bundles to facilitate loading and unloading. Although the committee failed to find such a machine in any of the equipment manufacturers' catalogs, it did locate equipment which, with relatively minor changes, could be adapted to do the work.

The equipment that came closest to meeting the requirements consisted of a Drott skid loader mounted on a TD-14 International Harvester tractor. The tractor is a crawler type of about 60 hp. The skid loader is a device with a hydraulically controlled lift mechanism, originally developed for picking up corded pulpwood or similar timber. It has lower arms or skids for plowing up the material and an upper curved jaw for confining the pieces and helping to form them into a bundle. Because the machine would be used to root up ties embedded in ballast it was evident that it would be necessary to strengthen the skids and shoe them with wear-resistant material. The manufacturer of the skid loader cooperated in altering his product and applied removable manganese steel shoes to the lower arms and strengthened the upper structural steel girder arms with welded tubular stiffeners.



**BANDING A BUNDLE**—While the ties were held firmly between the forks of the machine, four men, working in teams of two each side, cut steel strapping to length, stretched the bands around the bundles of ties and fastened them



**READY FOR LOADING**—When the banding operation had been completed, the machine deposited the tie bundle to one side. The crew became so proficient that it maintained a 2.5-min. banding-and-loading cycle

### THE OPERATION AT A GLANCE

The work of recovering the rails and fastenings, the cross-ties and the ballast from 66 miles of second main track on the Southern involved six major steps which, together with the machines used, are listed in sequence below:

(1) Loading of rails and fastenings with conventional equipment.

(2) Removing from the roadbed ties unsuitable for re-use.

(3) Rooting up and banding the usable ties into bundles, using a modified Drott skid loader (Drott Manufacturing Corporation, Milwaukee) mounted on an International TD-14 crawler tractor (International Harvester Company, Chicago).

(4) Loading tie bundles into cars with a Unit Model 1014 truck crane (Unit Crane & Shovel Corp., Milwaukee).

(5) Windrowing the slag ballast with a Caterpillar Model 12 motor grader (Caterpillar Tractor Company, Peoria).

(6) Picking up and loading ballast into cars with a modified Athey Model 125 Force-Feed Loader (Athey Products Corporation, Chicago).

About 10 per cent of the crossties which were unsuitable for further use were removed from the roadbed before operating the skid loader. The machine then advanced along the roadbed, with the plow shoes held below the ties, thus crowding the ties between the upper and lower forks of the loader. When a sufficient number of ties had been gathered to form a bundle, two steel straps were fastened around the ties while they were held within the forks of the loader, after which the machine deposited the bundle on one side of the roadbed near the ballast line.

It was found that the first 8 or 10 ties entering the forks of the loader determined the character of the bundle as to regularity and evenness. Warped ties usually caused trouble because they did not roll evenly between the forks, and also because they created a void in the bundle by wedging other ties out of position. Because of the up-and-down motion of the loader in action, and to prevent the upper fork from being damaged by being rammed against embedded ties, the bottom of this fork



**LOADING MADE EASY**—The tie bundles, which were spaced about 35 ft. apart, were loaded by a Unit Model 1014 truck crane onto cars of a work train





**WINDROWING THE BALLAST**—Several passes were made by a Caterpillar motor grader to scrape the slag ballast into windrows convenient for recovery of ballast



**HOW THE BALLAST WAS LOADED**—The windrowed ballast was picked up, elevated and deposited in hopper cars by this modified Athey Force-Feed Loader

was carried at a higher elevation than was actually necessary to provide an opening for the ties to enter. Neater and more uniform bundles than those actually obtained would have been possible if the upper fork could have been allowed to drag along the bedded ties, because the bundles would have formed quicker with less chance for the ties to roll.

Ties picked up on curved track were larger in size than those gathered on tangent track; hence fewer ties made up these bundles. The bundles ranged in number from 20 to 30 ties. The steel bands were 2 in. wide by 0.05 in. thick and were applied about 18 in. from the tie ends.

At times when steel strapping could not be obtained, heavy baling wire was used. The banding material came in reels which were mounted at the forward ends of the loader arms to be within easy reach, while extra reels were carried on holders near the rear of the loader arms. One reel contained sufficient banding material to keep the machine in continuous operation for one-half mile, whereupon another reel of strapping, previously distributed, was picked up as the machine passed.

#### **Banding the Bundles**

Banding operations were carried out by five men, in addition to the tractor operator. Two men worked on each side of the machine, and the other did odd jobs, such as marking and counting the ties in each bundle, reloading and greasing the banding reels, and helping to straighten the ties in the forks before the bands were tightened.

The two men assigned to each side of the machine worked as a team, with one man unrolling the steel strapping from the reel after the skid arms were loaded, and the other man carrying the end around the bundle. The first man, who was equipped with a cutting tool, then cut the strapping to proper length, allowing 10 or 12 in. of extra length for grasping by a stretcher tool, which was carried by the second man. The two ends were then brought around to the front and, after being

lapped through a seal, were pulled up as tightly as possible with the stretcher tools, and sealed.

After the tie loading and banding crew became proficient in these operations, it was able to maintain a 2.5-min. banding-and-loading cycle. Despite delays originating from bad sealing, badly loaded bundles that had to be reworked in the machine, curves, travel time, and repairs to the machine, the crew averaged 0.9 mile of ties removed and banded in an 8-hour day. Expressed differently, the ties in each mile of track, approximately 2,900, were bundled and banded with an expenditure of only 54 man-hours.

Another machine, a Unit Model 1014 truck crane, followed behind and picked up the tie bundles, which lay approximately 35 ft. apart, and, using a specially designed bridle sling with hooks spaced to fit the bands, loaded the bundles on flat cars of a work train occupying the remaining main track.

#### **How Ballast Was Picked Up**

Recovering the ballast presented a more complex problem. It was decided to remove the ballast down to the roadbed, leaving an adequate slope for cross drainage, and then to use the bare roadbed with some ballast bedded in it for an access highway for motorized maintenance equipment. This meant the removal of a mass of slag ballast about 10 ft. wide and 12 to 18 in. deep. A bulldozer or a blading machine of some kind was needed to throw the ballast into a windrow convenient for picking it up, and a self-propelled loading conveyor was also needed to pick up and load the ballast in hopper cars in a work train alongside.

A conventional bulldozer was tried out for windrowing the ballast, but was found to be awkward and ineffective. A motor grader proved to be more suitable, and a Caterpillar Model 12 unit was provided for this purpose. The ballast had to be windrowed more than once because the volume was too great to permit all of it to be picked up with any conventional machine in one trip. The motor grader was also useful for dressing the roadbed after the ballast had been removed.

A few conventional models of self-propelled loading machines are available on the market with adequate capacity for this ballast-recovery operation. But none was able to do all the things required for the job of recovering and loading the ballast in hopper cars. What was wanted was a machine that, while moving forward, would pick up the ballast at the rate of 400 to 500 cu. yd. per hour, elevate the material to the height of a car, and deposit it in the car by means of a conveyor able to swing through an arc of 90 deg. to the axis of the loader—these operations to be performed simultaneously.

The machine that most nearly met these conditions was the Athey Model 125 Force-Feed Loader. While this is a powerful machine with adequate speed and capacity, the production model is not designed to load a high hopper car from roadbed level and the side conveyor cannot swing 90 deg. However, since it was apparent that the alterations required to make these operations possible would be relatively simple, one of these machines was acquired.

The conveyor was raised, extended and strengthened, and hydraulic power for the swing conveyor was installed, with the result that material could be placed in any type of car at the required speed while both train and loader were in motion. Cars were loaded in a matter of minutes and a train load was easily recovered in a work-train day.

This article is based on information prepared by J. N. Todd, superintendent of scales and work equipment for the Southern, and George S. Baron, assistant supervisor.



**UP AND OVER**—By extending and strengthening the side conveyor of the Athey loader and adjusting it for a 90-deg. swing, ballast could be lifted over the high sides of the hopper cars

## New Device . . .

### A Versatile Portable Belt Conveyor

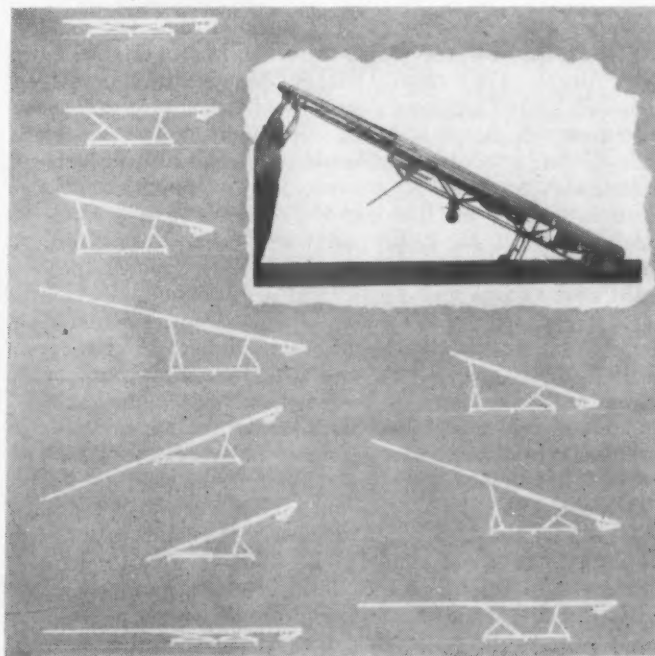
A portable belt conveyor unit that can be readily adjusted to ten different positions for low-to-high or high-to-low travel of varying distances has been produced by the Stewart-Glapat Corporation of Zanesville, Ohio. As the accompanying sketches show, the unit may be flexed into any combination of tilting — even to below-floor levels — and at the same time its length may be varied as much as 40 per cent. Called "Adjustoveyor," the unit comes in several sizes including an 8-ft. model which extends to 14 feet 6 inches, a 10-ft. model that extends to 18 feet, a 15-ft. model extending to 27 feet, a 20-ft. model extending to 38 feet and a 32-ft. model that will span a 55-ft. 6-in. gap. The manufacturer reports that it is able to carry full loads over the entire length of the belt even when the boom is fully extended. All standard belt widths are available and the unit is so designed that packages wider than the belt itself can be carried. Side rails are available, if desired.

Lighter units, which extend by sliding, will handle a total distributed load of 850 lb. and a net unit load of

150 lb. before belt slippage. Heavier models, which have a roller-type extension, will accommodate proportionately heavier loads. The lightweight model (illustrated) weighs 625 lb. complete—with  $\frac{1}{2}$ - or  $\frac{1}{4}$ -hp. 110- or 220-v. motor. Double-ended models — which can be extended simultaneously

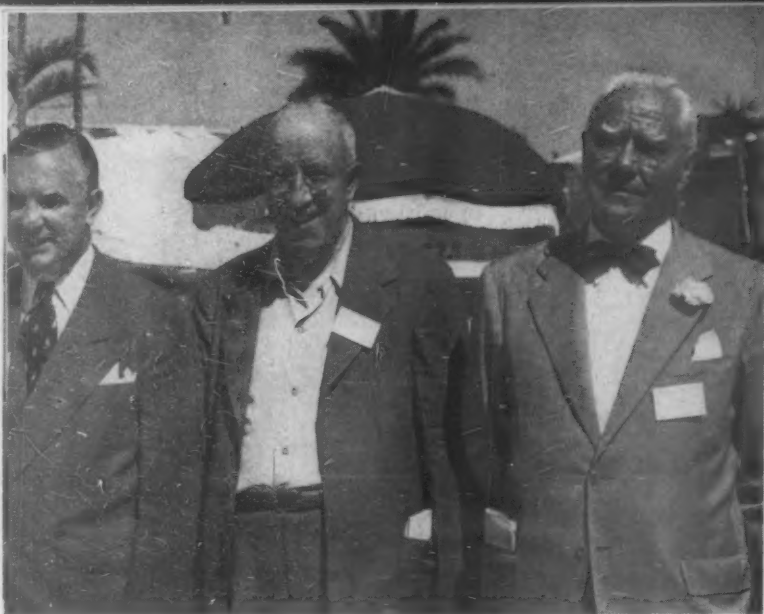
from both ends — are also available.

The Denver & Rio Grande Western has ordered one of the lightweight units for use at Denver, Colo. It will be tested in service for unloading freight cars. Such units might also prove applicable to the handling of mail and express traffic.



The "Adjustoveyor" can be moved from loading job to loading job in a matter of minutes.





Treasury Division executives at Palm Beach Convention. Left to right: E. R. Ford, secretary; G. H. Howe, chairman; and F. H. Jeffrey, incoming chairman



Vice-presidents Jerome and Place, of the New York Central, take time out to go after the big ones. Mrs. Jerome is reliably reported to have caught the biggest barracuda

## A Railway Age Convention Report

# Keeping Tabs on Railway Finance

*Superficially, the railroad picture looks good—but it is not good. Shifts in population of previously unparalleled proportions have created an imbalance that is dangerous not only to less fortunate lines but to some of the prosperous companies as well. As a closely regulated industry, railways have borne an undue share of inflationary evils and despite remarkably improved operating efficiency, their return on investment is only about half that of other regulated industries.*

This was the burden of the message brought to the 40th annual meeting of the Treasury Division of the Association of American Railroads by its officers and other speakers. The meeting, devoted as usual to a thorough exploration of railway financial and tax matters, was held at the Palm Beach Biltmore Hotel in Palm Beach, Fla., from October 31 to November 2, preceded by the customary session of the advisory committee on October 30. Along with some 435 members and guests—a record—the heads of three railways were in attendance; Legh R. Powell, Jr., of the Seaboard; Norman Call of the Richmond, Fredericksburg & Potomac, and Scott M. Loftin, of the Florida East Coast. G. H. Howe, treasurer of the New York Central, presided as chairman and Vice-Presidents Jerome and Place of that railroad were present. Three vice-presidents of the A.A.R. addressed the meeting—Robert S. Henry, Walter Kelly and E. H. Bunnell. Rounding out the executive roster were a record number of presidents and vice-presidents of banks and security companies.

Americans today have a solemn obligation to set an example of honor and integrity for the world, Mr. Powell told the division, after giving a scholarly presentation of the history of treasurers from the remotest antiquity. "It is not enough," he said, "merely to share our material resources with less fortunate nations."

He urged that individuals recognize their own personal responsibility in preserving the freedoms which have

made America the greatest nation in the world and said that attacks against those freedoms must be soundly defeated. "It is up to us," he concluded, "to unite in zeal and faith, to guard for ourselves and to protect for posterity this liberty and freedom."

Colonel Henry told the treasurers bluntly that the railway financial situation is precarious, pointing out that returns of three per cent on investment were just about half those of other regulated industries. "Railway treasurers can be most effective public relations men," he said, "but there is no use in simply complaining in general terms. No good purpose is served in telling people your troubles if they think that those troubles are your own fault. Railways are accused of pricing themselves out of business, but facts do not bear this out. Since prewar days, wages have gone up 140 per cent and the cost of materials and supplies has risen 130 per cent. Taxes have increased astronomically, yet the basic freight rate has gone up only 67 per cent in theory and only about 50 per cent in actual practice, since, in many states, the authorized increases have been suspended by regulatory bodies."

To arm the treasurers against the extravagant claims of the trucking industry as to the percentage of freight handled, he pointed out that there is a distinct and prevalent "gimmick" in all statistics issued by truck interests. "They claim to be handling 90 per cent or some such absurd figure of the American freight. These figures are based on tons and not on ton-miles. According to them, a ton hauled less than a mile by truck counts just as much as a ton handled several hundred miles—or even thousands of miles—by rail, an obvious fallacy, but one that misleads a lot of people nevertheless."

Scott Loftin, trustee of the Florida East Coast, outlined Florida's history, particularly with reference to the development work done by the late Henry M. Flagler in pushing the rails of the F.E.C. into previously unin-

habited jungles and swamps. He also told of the present importance of the state as a traffic producer for railroads and of the tremendous potentialities of an area that still has only six per cent of its arable land under cultivation.

Walter F. Hahn, railroad securities analyst for Smith, Barney & Co., New York, discussed from the security market's viewpoint the present state of railroad securities and comparative railroad incomes. An abridged version of this paper forms the article on page 45 in this issue.

Walter Kelly, vice-president, A. A. R., said: "The rate of return on net investment in the first nine months of 1951 approximated 3.07 per cent, compared with 3.69 per cent in the same period of 1950. Our industry cannot continue to provide the necessary service on such inadequate earnings. The railroads must be permitted to recover from the traffic they handle their increased costs in wages, materials, supplies and taxes." He urged that the treasurers attend regional shippers advisory board meetings and other gatherings where they may make contact with the railroads' customers.

R. C. Downie, president of the Peoples First National

Bank & Trust Co., Pittsburgh, spoke for the bankers and stated that the country is in its worst depression—a moral depression affecting all phases. He urged that people of the middle class give more attention to voting to correct this condition.

E. H. Bunnell, vice-president, A.A.R., announced his intention of retiring on March 1, 1952, and outlined the 15 years of his stewardship of the Finance, Accounting, Taxation and Valuation Department of the A.A.R. By simplifying and amending Rule 7 of the Consolidated Freight Classification, this department has been largely responsible for reducing fines and penalties assessed against the railways for violation of Rule 7 from \$900,000 in the ten years prior to 1944 to an inconsiderable sum since that time. This, he pointed out, is but one of the more spectacular savings that the work of the department has affected.

F. H. Jeffrey, treasurer of the Chicago, Milwaukee, St. Paul & Pacific, was elected chairman for the ensuing year. A. M. Waldron, treasurer of the New York, Chicago & St. Louis, was elected vice-chairman. Swampscott, Mass., was selected as the scene of the 1952 meeting.

## Letters from Our Readers . . .

### Before It's Too Late!

DALLAS, TEX.

TO THE EDITOR:

In the September 24, 1951, *Railway Age* is an article by Reginald Perry, entitled "How the Alaska Railroad Trains Shop Apprentices." It seems a coincidence that this article is published immediately following remarks I heard at the recent mechanical meetings in Chicago.

Those remarks were made on the floor at the Locomotive Maintenance Officers' Association meeting just prior to the presentation of the committee report on The Training of Diesel Personnel. I quote:

"I feel, as a great many people do, that the selection and the employing of apprentices and other personnel is management's prerogative and with that goes the obligation to train those people. I think we should resist every effort—and there is some effort by outside sources—to gain control of our training programs."

The article in *Railway Age* made me wonder just how far the Bureau of Apprenticeship of U. S. Department of Labor has grown. On occasion, I have entered into friendly debate with some of the advocates of this type of apprentice training. One of their arguments for it is that the young apprentice is as much entitled to the educational expenditure as the boy who attends the state university. Sounds good, but why do we need Uncle Sam to get into it and what is wrong with the apprentice training programs of the railroads and other industries as they have existed for many years?

It was a coincidence that I read the following in an article by Lynn Landrum, a local columnist in the Dallas Morning News, on the same day I read the *Railway Age*:

The federal government is to be asked to pay \$1 million to help meet the costs of the City-County Memorial Hospital. There is nothing particularly national about the hospital. It is just another local institution. The federal government doesn't owe this \$1 million. . . .

Can you explain how anybody saves money by collecting \$1,250,000 from Dallas county, transporting it to Washington, paying collectors to collect it, bookkeepers to keep track of it, budgeteers to budget it, Congress to debate it, clerks to keep up with it, engineers to survey it, architects to check on it, archivists to record it, and

so on and on, with lawyers, secretaries, subsecretaries, stenographers, mimeographers and public printers and on and on—and the million and a quarter comes back a bare million dollars? . . .

The President wants 10 billions more in taxes. Instead of raising taxes 10 billions we could cut taxes by that much, if the states would go to work and pay their own bills, the cities and the schools and whatnot would meet their own expenses. . . .

It is time for somebody to revolt against this system. It is time to make local self-government what it ought to be—self-operating and self-supporting.

It seems to me there is a relationship between federal sponsored, financed and controlled apprentice training programs and what Mr. Landrum writes about government aid to a local hospital. What do you think?

A RAILROAD READER

### No "Shorts" Under New Waste Specifications

MINNEAPOLIS 3

TO THE EDITOR:

I was very much interested in the editorial on page 30 of the August 27 *Railway Age*. The more light we get on this subject of journal-box packing the better for all concerned. However, I must take exception to the writer's statement that a handful of waste out of a newly packed box will produce when shaken a "fake Hollywood snowstorm" of short threads.

I don't believe the stuff we are selling to the railroads would give any such effect or result; in fact, I know it won't. Now, what is possible is that your writer was thinking of some material that came out of some railroad reclamation plant that was so old and out of date that it wasn't doing its work. It might be possible, as the result of such poor reclamation, that a lot of the shorts which should come out during reclamation were left in.

Or, it might be that under the old A.A.R. specifications before the new one was adopted last January, when a lot of shorts were permitted in the packing, such would be the case. Under the new A.A.R. specifications, however, such is not the case with any waste mill that recognizes its portion of the grave responsibility that rests upon all of us to improve this hot-box situation.

H. W. BISHOP  
Nash-Finch Company





## Defense—and the Railroad Problem

By J. M. SYMES  
Vice-President—Operation  
Pennsylvania

There is an immediate danger confronting an important segment of our economy and threatening the success of our defense program which I wish to discuss.

The biggest problem confronting the railroad industry during the past several years—and still unsolved—is the failure of those regulating the pricing of the industry to recognize that when inflation moves in on the costs of conducting business, as it has since World War II, it must also move in on the pricing of the product sold. We sell but one product—transportation—moving people and goods to where they want to go. Why we are denied the right to increase charges, in keeping with increased costs, is difficult to understand.

Freight rates represent a far lower proportion of the cost of commodities today than they did 20 years ago. Despite this, the Interstate Commerce Commission has reduced, or delayed inordinately, practically every request the railroads have made during the past 20 years for a general adjustment of freight rates. The recent decision of the commission to cut the rate application of the railroads in half has failed utterly to meet the increased costs which are absolutely necessary to place the railroad industry in position to give our country

This article is an abstract of an address before the Fifth Annual Conference of Bank Correspondents at St. Louis, November 6.

the improved equipment and service called for by the men in charge of defense mobilization of the nation.

Here is what we are up against! For the railroad I represent, the I.C.C. has authorized freight rate increases this year that will increase gross revenues in the calendar year by \$27 million. The increased cost of wages and materials during this same calendar year will amount to \$85 million. This means we are \$58 million short in this one year alone from obtaining relief on rates to offset increased costs. Extending this situation to a full year—increased rates would amount to \$59 million, and increased wages and materials to \$96 million—still \$37 million short in offsetting increased costs.

We are told overnight, or even to a retroactive date, by government agencies, that our wage rates have been increased. We are told overnight that our costs of materials have gone up and that the manufacturer must have inflationary protection through escalator clauses in the purchase contracts we make. But we are told by the I.C.C.—many months after our costs have gone up—that “you can’t have what you are seeking in the way of increased pricing”—because, as nearly as I can understand the reasoning, “we just won’t authorize it.”

### **“Time for a Change”**

In the years following World War II there have been a number of applications for increased rates to partially offset inflationary costs, but from the time the applications were filed for such relief until actually granted—averaging nearly a year—we were deprived of nearly \$400 million in revenue on the Pennsylvania alone. Revenue so sorely needed to improve, maintain and expand our plant to meet the challenge of the future.

Why is the industry being shackled in this manner, and what can be done about it? The nation’s defense effort and the economic soundness of all types of business will be endangered unless the I.C.C. changes the practice it has followed of “too little and too late” in regulating railroad rates and fares. If the commission does not change such practices of its own accord, Congress should amend the Interstate Commerce Act.

Sixty-four years ago, when the Interstate Commerce Act was first written, it was a good law for our country, that then, except for steel rails, was ankle deep in mud. At that time the railroads were more or less of a monopoly in the transportation field. Today they compete for every ton of freight and every passenger they carry, but they are regulated under a statute that has not been adequately amended to meet modern conditions.

The railroads required regulation in the public interest when the act was written, and as then administered it no doubt served the need of the time. However, during the past 50 years there has been a complete change in transportation in this country. We now find the nation laced with superhighways, checker-boarded with airports, dredged for thousands of miles of inland waterways, and crisscrossed by ditch-diggers as 150,000 miles of pipelines are burrowed under ground. The railroads no longer need regulation over rates insofar as “ceilings” are concerned. Competition from outside the industry now takes care of that.

### **A Management Responsibility**

Unfortunately, however, it is apparent that regulatory authorities give much weight in their decisions as to whether increased rates might drive rail traffic to other competitive forms of transportation—adversely affecting net income to a greater extent than increased rates might

improve net income. *I say that should not now be a consideration of regulatory authorities.* If the railroads require additional net income—and the records clearly indicate that they do—not even disputed by regulatory authorities—they should be permitted to bring it about in a businesslike way. If management does not know how to price the product in a competitive market, such as we now have in the transportation field, then there should be new management. But we should not now delegate that very important function of management to those not held directly responsible for their actions. Don't misunderstand me—I am not advocating that the railroads be released from all regulation—I am suggesting that they be relieved from the shackles of over-regulation, such as is now occurring by working under procedures of an act written more than 50 years ago and not adequately amended since. . . .

The next biggest problem facing the industry is that of subsidy. The inherent economic advantage of rail transportation is being submerged by the subsidy of other forms of transportation, particularly the highways and airways.

All modern transportation agencies have a proper field in the economy of our country, and each has certain inherent advantages over the other. However, these inherent advantages should not be pushed aside by subsidy, and when such subsidy enables one transportation agency to take traffic from another that is not subsidized, you have the forerunner of destruction of a healthy transportation system. All the railroads ask is equality of treatment—and from there on it is up to each transportation agency to demonstrate its ability to survive. A transportation agency that can produce the demanded service of the shipper, at the lowest *full* costs, is the one that should move the traffic. . . .

Without adequate railroad transportation there could not be adequate defense or war production in this country. That is a fact not disputed by anyone. If the railroads are prevented from procuring adequate earnings, to improve and expand their facilities, and outside capital is not obtainable, which it certainly will not be without proper earnings, where is the money coming from to do the things that need be done? . . . If the railroad plant is allowed to deteriorate, and there is not sufficient equipment to move the traffic, it would be the most serious thing I could think of in our economy or in our defense.

### **What the Law Requires**

In 1950 Congress passed and the President signed the act known as the "Defense Production Act of 1950." The purpose of this act was to strengthen this country militarily and economically, to enable it to carry out the policy, as stated in the act, "to oppose acts of aggression and to promote peace," and "to develop and maintain whatever military and economic strength is found to be necessary to carry out this purpose."

To achieve this objective, the act expressly states that there must be "expansion of productive facilities beyond the levels needed to meet the civilian demand." Expansion of productive facilities, in a free enterprise economy like ours, necessarily means increased investment by private capital in the creation of additional productive facilities. This in turn means that private capital must be allowed to earn enough to provide additional funds for such increased investment.

With this policy of encouraging expansion of productive facilities in mind, many agencies of the federal government have been calling upon the railroads to

acquire additional freight cars and locomotives, and otherwise build up the railroad plant. And the railroads have undertaken to build up their plant by addition of large quantities of equipment and other facilities.

But acquisition of these and other additional facilities so vitally needed for the expanded transportation essential to the country's defense effort requires investment of large amounts of additional capital on the part of the railroads. This capital can come only from earnings—or from loans, which require earnings to carry them and pay them off.

Earnings adequate to enable the railroads to build up and expand their plant, for achievement of the objective set up in the Defense Production Act, and at the same time maintain their financial soundness, are simply not available to the railroads without adequate rates and fares. One of the main objectives of the railroads in asking for the increase proposed in the recent general rate case was to enable them to provide for the plant expansion and improvement called for by the Defense Production Act.

### **A Paradoxical Performance**

Surely, in these circumstances, it should be the duty of government, which is charged with administration of that act and achievement of its purposes, to aid the railroads in reaching a rate level which would permit sound financing of adequate plant expansion. But, in fact, the efforts of government have to a large degree been exerted in precisely the opposite direction. Several important departments of government actively and vigorously oppose the rate relief sought by the railroads. And the action of the commission itself, which has held the railroads down to an inadequate rate level designed to produce anything but a fair return on their investment, can have only the effect of preventing the railroads from achieving that degree of financial soundness which would permit plant expansion and improvement to the extent called for by the national welfare and contemplated in the Defense Production Act. Does this all make sense? I don't think so.

The railroads need money—need it to improve their properties and carry on a more efficient transportation service than ever before—so essential to the economy and defense of the country. It is not in the public interest to deprive them of the right to adequate earnings on their investment—to earn enough to pay their owners an adequate return—to earn enough to put some of it into the improvement of the property—to earn enough to attract outside capital. If we are not permitted to do this, and we are not, principally because of the conditions I have cited, then we cannot survive under the free enterprise system.

The railroad industry is a substantial part of the more than \$100 billion of private and government funds invested in transportation of all kinds in this country, representing one-fifth of the nation's productive capital assets. Whatever happens to these vast public services in the critical years ahead, will shape the destiny of America for generations to come. Agriculture, industry, or finance cannot survive within the framework of the enterprise system, if transportation is permitted to drift into government ownership. The great need today is for the railroads and industry, and finance and others, to coordinate their efforts to keep enterprise alive and healthy, in all segments of our economy, and to demonstrate that no socialistic bureaucracy can compete in benefits to the individual citizen with economic freedom, which is the keystone of all liberty.



## GENERAL NEWS

### Road Can't Pay for Spotting

(Continued from page 18)

sion cited a previous commission determination that a carrier "has no right by tariff to include, within the switching district, tracks over which the carrier has no right to operate as a common carrier, or which cannot be served by other common carriers through switching arrangements or otherwise."

### Drexel Group Told Railroads Are Ready

Transportation as the vehicle for defense production was the subject of a panel discussion November 1 in connection with the 60th anniversary convocation of Drexel Institute of Technology in Philadelphia.

"The railroads are prepared to meet all requirements of mobilization," said Dr. Julius H. Parmelee, vice-president of the Association of American Railroads and director of its Bureau of Railway Economics.

Col. J. Monroe Johnson, member of the Interstate Commerce Commission, speaking from the viewpoint of his experience as wartime director of the Office of Defense Transportation, warned against "complacency" in appraising the capacity of transportation agencies to meet possible demands upon them.

Edgar S. Idol, general counsel of the American Trucking Associations, indicated that if the intercity truckers are to make their proper contribution to the pool of transportation service, the nation must build for their use "a system of roads adequate for today's and tomorrow's traffic."

Maj. Gen. Frank A. Heilemann, chief of transportation, Department of the Army—speaking as a "shipper" and not as the director of operations of American railroads under executive order taking them over to avert strikes—outlined the military program to develop alternate ports for emergency use. While agreeing that the United States has an unequalled transportation system, and paying tribute to the railroads as the only mode of transportation that has the means to handle the burden that war would bring, General Heilemann warned that in war there is "never enough transportation."

Brig. Gen. Charles D. Young, retired vice-president—real estate, purchases and insurance of the Pennsylvania, was chairman of the panel. He summarized the findings of the "progress report" on the Senate transportation investigation recently submitted by Senator Bricker (*Railway Age*, October 29, page 11).

Dr. Parmelee supported with five reasons his assurance that the railroads will meet all requirements for trans-

portation service: (1) Past experience, particularly in World War II; (2) the railroads' advanced state of preparedness, a result of immense capital investment since 1945; (3) the year-round, all-weather adaptability of railroads to emergency conditions; (4) the effective organization for teamwork between the railroads, shippers and government agencies; and (5) the railroads' operating efficiency.

There are, however, obstacles to railway progress which, if not effectively dealt with, will "sap the strength of the railroads," said Dr. Parmelee. He enumerated such conditions as the carriers' inability to realize an adequate net income, inequitable competitive conditions, materials shortages, and the danger that further claims will be filed for so-called overcharges on government freight.

## ORGANIZATIONS

At the annual meeting of the **Car Foremen's Association of Chicago**, held October 12, the following officers were elected for the coming year: President, C. T. Graves, assistant chief engineer, General American Transportation Corporation, Chicago; first vice-president, J. F. Monger, car shop superintendent, Illinois Central, Chicago; second vice-president, H. A. Harris, master car builder, Gulf, Mobile & Ohio, Bloomington, Ill.; secretary-treasurer, W. H. LaMon, Chicago, Burlington & Quincy, Downers Grove, Ill.

The **Railway Business Women's Association of Chicago** will hold its 26th annual birthday party at the Country Club Hotel, 6930 South Shore drive, at 1 p.m. on November 17.

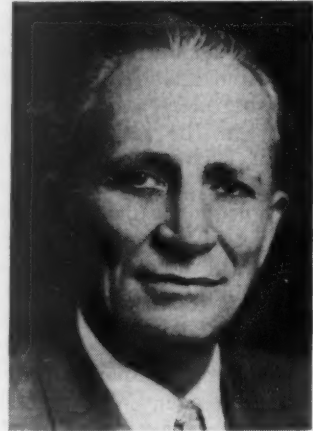
The **Railway Business Women's Association** and the **Pacific Railway Club** will hold a joint meeting on November 15th at the Sir Francis Drake Hotel, San Francisco. The Women's Traffic Clubs of San Francisco and Oakland have been invited to attend this meeting, at which the guest speaker will be Honorable Theresa Meikle, judge of the superior court, San Francisco.

The **Traffic Club of New York** will hold its annual Thanksgiving luncheon in the Commodore Hotel on November 15.

The **Chicago Transportation Club** will observe "industrial night" on November 15, when the group will hear a talk by Lowe P. Siddons, traffic manager of the Holly Sugar Corporation, Colorado Springs, Colo. Some 20 industrial firms will have exhibits for the meeting, which will be held in the La Salle hotel at 7 p.m.

## SUPPLY TRADE

**E. H. Stau** has been appointed sales manager of a newly created Pacific division of the **Townsend Company**, effective January 1, 1952. Mr. Stau, formerly general manager of



E. H. Stau

the **Cherry Rivet Company**, a division of Townsend, will direct sales activities for the parent company on all Townsend cold-headed metal products in the 13 Pacific coast states.

**Elmer M. Miller**, formerly service engineer for the **National Aluminate Corporation**, has been appointed assistant to vice-president, with headquarters as before at Chicago. Mr. Miller will continue to handle sales and service of Nalco products on a number of midwestern railroads.

**William Kucharek**, formerly sales staff engineer of the **Scintilla Magneto** division of the **Bendix Aviation Corporation**, at Sidney, N. Y.,



**H. A. Nielsen**, who is in charge of the new Los Angeles sub-office recently opened by the **Baldwin-Lima-Hamilton Corporation** in the Pacific Electric building, 610 South Main street. Mr. Nielsen formerly was assistant to the district manager at San Francisco

# 40 USERS...since 1935

## WAUKESHA Engine Driven RAILWAY EQUIPMENT

1935

- ★ Chicago & North Western (D)
- ★ Illinois Central
- ★ Missouri Pacific
- ★ Texas & Pacific

1936

- Canadian Pacific Railroad
- ★ Chicago Milwaukee St. P. & Pacific
- ★ Chicago Rock Island & Pacific (D)
- ★ Mpls. St. Paul & Sault Ste. Marie
- ★ St. Louis-San Francisco
- ★ Southern Pacific (D)
- ★ Union Pacific (D)

1937

- ★ Chicago St. Paul Minneapolis & Omaha
- ★ Northern Pacific
- ★ Texas & New Orleans
- ★ Gulf Mobile & Ohio

1938

Southern Pacific of Mexico

1939

- ★ The Pullman Company (D)

1940

- ★ Chicago Burlington & Quincy (D)
- ★ Denver & Rio Grande Western
- ★ Minneapolis & St. Louis

1941

- ★ Chesapeake & Ohio
- ★ Kansas City Southern
- ★ Seaboard Air Line

1942-4

### WAR PERIOD

- ★ Nat'l Railways of Mexico
- ★ Great Northern (D)
- ★ St. Louis & Southwestern
- ★ Western Pacific

1945

- ★ Atchison Topeka & Santa Fe

1946

- Chicago Indianapolis & Louisville
- Missouri-Kansas-Texas
- ★ Chicago South Shore & So. Bend

1947

- ★ Chicago & Eastern Illinois (D)
- ★ Spokane Portland & Seattle

1948

1949

- Pullman-Standard Car Mfg. Co. (D)
- Bessemer & Lake Erie
- Duluth Missabe & Iron Range

1950

Fort Worth & Denver City

1951

- Chicago Great Western
- Nashville Chattanooga & St. Louis
- Toledo Peoria & Western

★ Have placed repeat orders—there is no better endorsement.  
(D) Diesel Engines\*.

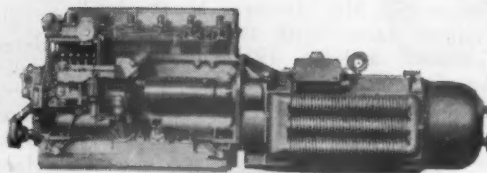
**WAUKESHA MOTOR COMPANY**  
WAUKESHA, WISCONSIN  
Largest Builders of mobile engine-driven Refrigeration  
and Generator Equipment

### DIESEL ENGINATORS\*

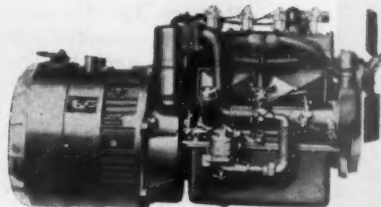


Waukesha 25 KW —  
Enginators\*—32-V.,  
64-V., or 110-V., DC;  
31.25 KVA, 220-V.,  
60-cycle 3-phase AC.

Waukesha 25 KW  
Diesel Enginators\*—  
fuel injection side.

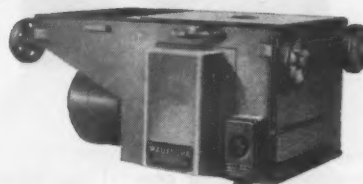


### PROPANE ENGINATORS\*

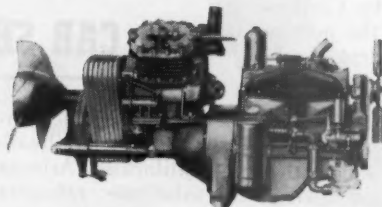


7½ KW Waukesha DC En-  
ginators\*—compact, light-  
weight, dependable, auto-  
matic, entirely independent  
—supplies full voltage at all  
times.

7½ KW Waukesha DC En-  
ginators\* Unit, 32-V. or 64-V.  
DC; Propane Engine; in cush-  
ion wheel-mounted cabinet.

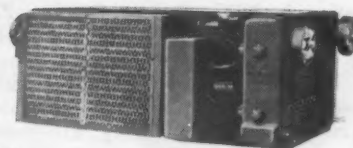


### PROPANE AIR CONDITIONING UNITS



Waukesha Ice Engine,  
7-8 tons—delivers full  
car-cooling capacity un-  
der thermostatic control,  
regardless of car loca-  
tion or movement.

Ice Engine Unit, with propane  
engine. Sound absorbing  
material lines engine com-  
partment and unit has cush-  
ion wheel mounting.



\*Reg. U.S. Pat. Off.

WRITE FOR LITERATURE

134

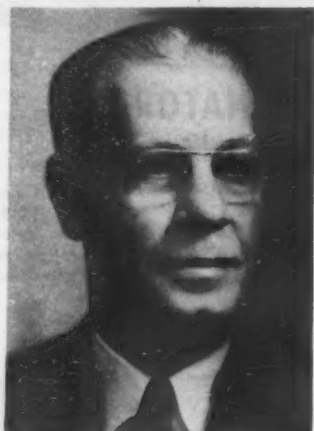


has been appointed district application engineer for the division, with headquarters at Detroit. He will assist **J. J. McCarthy** in coordinating the Bendix division's sales and engineering activities in the Detroit area and in Michigan, Indiana and Ohio.

The **Chicago Railroad Supply Company** has moved to larger quarters at 225 North Wabash avenue.

**Charles F. Palmer** has been elected president of the **Peerless Equipment Company**, a subsidiary of **Poor & Co.** He succeeds **William E. Gray**, who has resigned. A biographical sketch and photo of Mr. Palmer appeared in the October 22 issue of *Railway Age*, in connection with his retirement as vice-president of the **Pittsburgh Steel Company**. His new headquarters will be in Chicago.

**Ralph G. Detmer** has been appointed vice-president—trackwork division of the **Taylor-Wharton Iron & Steel Co.**, with headquarters at Cincinnati. Mr. Detmer began his business career with the **Weir Frog Company** and in 1921 joined the **American Frog & Switch Co.** as chief engineer. He was appointed general



**Ralph G. Detmer**

manager of that company in 1930 and vice-president and general manager in 1943. Since 1949, following consolidation of Taylor-Wharton and its wholly owned subsidiary, **American Frog & Switch**, with the **Weir Kilby Corporation**, Mr. Detmer has held the position of assistant to the president—sales and engineering.

## OBITUARY

**Donald S. Barrows**, who retired as vice-president in charge of engineering for the **Symington-Gould Corporation** in 1947, died on October 27, at his home in New Haven, Conn. He was 74 years old. Mr. Barrows joined the **T. H. Symington Company**, a predecessor of **Symington-Gould**, as chief engineer, in 1915. During his years with the **Symington companies** he is said to have obtained more than 250 patents for railroad equipment manufactured by his firm.

## EQUIPMENT AND SUPPLIES

### FREIGHT CARS

The **Barrett Division** of the **Allied Chemical Dye Corp.** has ordered from the **American Car & Foundry** 100 all-welded tank cars of 12,500 gal. capacity, for general service.

The **Chesapeake & Ohio's** board of directors has authorized purchase of 1,000 hopper cars at an approximate cost of \$6,000,000.

The **Western Maryland** is inquiring for 750 55-ton hopper cars and 250 40½-ft. 50-ton steel sheathed box cars.

### MARINE

The **Chesapeake & Ohio** has ordered one 370-ft. car float from the **Sun Shipbuilding & Drydock Co.** for carrying loaded freight cars between **Newport News** and **Norfolk**. The new float, which will increase the **C. & O.'s** **Hampton Roads** fleet to five vessels, will have a beam of 52 ft. 9¾ in. Its capacity will be 1,850 gross tons, or the equivalent of 27 or 28 loaded freight cars. The road's request for bids to build the float was reported in *Railway Age* August 27, page 60. Delivery is expected 180 days after receipt of steel for its construction at the builder's yard.

### SIGNALING

The **Electro-Motive Division** of **General Motors Corporation** has ordered from the **Union Switch & Signal Division** of **Westinghouse Air Brake Company** 10 sets of 2-indication automatic stop and speed control equipment to be installed on diesel-electric locomotives being built for the **Louisville & Nashville**.

### CAR SERVICE

I.C.C. Service Order No. 851, which authorizes railroads serving **Oregon**, **California**, **Arizona** and **Nevada** to substitute refrigerator cars for box cars, has been modified by Amendment No. 7 which set back the expiration date from October 31 until January 31, 1952.

I.C.C. Service Order No. 860, which provides for the substitution of refrigerator cars for box cars to transport fruit and vegetable containers and box shooks in **Pacific-Coast** states, has been modified by Amendment No. 5, which set back the expiration date

from October 31 until January 31, 1952.

I.C.C. Service Order No. 869, which restricts the use of RS type refrigerator cars for commodities other than perishables, has been modified by Amendment No. 4, which set back the expiration date from October 31 until March 31, 1952.

I.C.C. Service Orders Nos. 870 and 871, which restrict the free time allowed on freight cars at ports, have been modified by amendments (Nos. 3 and 4, respectively) which set back the expiration dates from October 31 until February 29, 1952.

I.C.C. Service Order No. 865, which imposes super-demurrage charges running up to \$20 per day, has been modified by three additional amendments—Nos. 15, 16, and 17. The first set back the order's expiration date from October 31 until January 31, 1952. Amendment No. 16 extended for another month (until December 1) the exemption provision applicable to refrigerator cars. Amendment No. 17 suspended the order with respect to cars at ports where unloading is interfered with due to strikes of longshoremen.

## CONSTRUCTION

### P.R.R. to Spend \$9 Million On Morrisville Yard Project

Expansion and modernization of **Morrisville** freight yard near **Trenton, N. J.**, at a cost of more than \$9,000,000, has been announced by **E. W. Smith**, vice-president of the **Pennsylvania's Eastern** region. The project is being undertaken in anticipation of industrial development in the **Trenton-Morrisville-Bristol** area expected to result from completion of the new **Fairless Works** of the **United States Steel Company**, and to provide better service to manufacturers and other shippers already located there.

Subject to unforeseen developments in the international situation and availability of materials, the rebuilt yard should be in full operation by the end of 1953, Mr. Smith said, at which time operations now carried on at the **Coalport** freight yard, **Trenton**, and at the **East Trenton** enginehouse, will be transferred to new facilities at the **Morrisville** site. A large part of the land now occupied by these activities in **Trenton** will be made available for manufacturing and other industrial purposes.

"In reconstructing the **Morrisville** yard," Mr. Smith said, "every consideration is being given to employee safety and welfare as well as to efficient and economical operation. Tracks will be relocated to provide greater clearances between trains; extensive flood-lighting will be installed for good visibility during night opera-

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Be sure to get these *PLUS values* when buying locomotive nuts. Specify RB&W.



**RUSSELL, BURDSALL & WARD BOLT AND NUT COMPANY**

Plants at: Port Chester, N. Y., Coraopolis, Pa., Rock Falls, Ill., Los Angeles, Calif. Additional sales offices at: Philadelphia, Detroit, Chicago, Chattanooga, Dallas, Oakland. Sales agents at: Portland, Seattle.



**106 YEARS MAKING STRONG THE THINGS THAT MAKE AMERICA STRONG**



tions; protected underpasses have been designed to give employee access to enginehouse and shop areas, yard offices, and other working areas without necessity for crossing running tracks; power operated switches will be used; and conveniently located parking lots will be arranged for employees' automobiles. Also, provision has been made for eventual installation of automatic car retarders which will simplify and accelerate switching work."

Extending some 3½ miles west of Morrisville, the Morrisville yard was placed in service at the turn of the century, following completion of the Trenton cut-off, a 45-mi. long, easy-gradient line which permitted through freight traffic from western points to by-pass the Philadelphia metropolitan area via Thorndale, rejoining the main line again at Morrisville. It served for many years as principal advance classification yard for freight destined to the eastern seaboard. Closed during the 1930's, Morrisville yard was used heavily during both world wars as a storage and supporting yard for traffic consigned to New York for local delivery or shipment overseas. With the dropping off of traffic after the end of hostilities, the yard was again placed in a reserve status, from which it this year began to emerge as work progressed on U. S. Steel's new mill and a number of related housing developments. A few of its tracks are currently needed for handling carloads of machinery, building supplies, etc.

Some indication of the size of the project may be obtained from the following figures: Present tracks to be taken up—138,000 feet; yard tracks to be shifted—70,000 feet; to be relaid, including new tracks—150,000 feet; turnouts to be taken up—177; turnouts to be installed—190; grading to be done, cut or fill—200,000 cubic yards; and ballast required for tracks—125,000 cubic yards.

With 45 classification tracks, the easterly unit of the yard will have a standing capacity of 2,000 cars to handle eastbound and westbound freight. Nine shop tracks and enginehouse tracks will be to the north, and on them will be located the new enginehouse for maintenance of electric road locomotives and diesel-electric switchers, together with inspection and cleaning pits, sandhouse, storerooms, fuel storage tanks, and facilities for making running repairs to freight cars in transit. A short distance west of Lower Morrisville road and also north of the tracks will be a 125-bed dormitory building, 185 ft. by 50 ft. in size, to provide sleeping quarters for train and engine crews away from home, as well as cafeteria and other services for all employees. Also near this location will be the hump track, equipped with a 65-ft. 200-ton capacity weighing scale. A three-story control tower from which switches and signals in the yard may be operated will be placed close to the hump. A new yardmaster's office

will be built near the yard's extreme eastern end.

West of the hump will be the second unit of the yard, with 17 tracks having a standing capacity of 1,200 cars. It will serve as a receiving yard for freight trains in both directions. Improvements will include construction of four new tracks of 165-car capacity each for eastbound freight and two new tracks of 150-car capacity each for westbound trains. Three spurs now used for ground-storage of coal will remain for storage of ore. West of the Lincoln Highway, which crosses Morrisville yard near the site of a formerly active but now discontinued hump track, is the third unit, with 13 tracks having a standing capacity of 1,500 cars. It will be used for storage purposes.

Among interesting features of the reconstructed yard will be a new system of talk-back loudspeakers, which will permit orders to be given from the central control tower to any part of the area, with microphones so located that yard employees and train crews can ask questions or give reports to the tower without delay or interruption to their work. Teletype-writers and pneumatic tubes for conveying messages will further aid communications.

Initial contracts for track work have been awarded to Lawrence E. Pilot & Sons, Philadelphia, who already have several hundred construction workers on the job. Work will be under general supervision of L. P. Struble, chief engineer of the P.R.R.'s Eastern region. C. L. Towle, of Mr. Struble's staff, is resident engineer in charge of the project.

## FINANCIAL

**Canadian Pacific.—Bonds.**—A total of \$30,000,000 of convertible collateral 3½ per cent bonds were offered for sale recently in Canada at 100 by an underwriting group. The bonds, convertible from April 1, 1952, to April 1, 1959, into ordinary stock at the rate of 29 shares for each \$1,000 of bonds, are secured by the C. P.'s perpetual debenture stock in the ratio of \$120 principal amount for each \$100 of collateral bonds. Proceeds from sale of the issue are to be used to reimburse the company for money spent for equipment.

**Chicago, Burlington & Quincy.—Trackage Rights.**—Continued use by this road of Union Pacific trackage between Gilmore Junction, Neb., and South Omaha, 4.5 miles, has been approved by the I.C.C. This road has used the U.P. tracks since 1900, but the agreement covering such usage expired. With revisions designed to bring it up to date, the agreement is being extended for 50 years. This new agreement is dated as of July 1, 1949.

## Dividends Declared

**CHESAPEAKE & OHIO.**—common, increased, 75c, payable December 20 to holders of record November 30; 3½% convertible preferred, 87½c, quarterly, payable February 1, 1952, to holders of record January 4, 1952.

## Security Price Averages

	Nov. 5	Prev. Week	Last Year
Average price of 20 representative railway stocks	52.19	53.12	46.86
Average price of 20 representative railway bonds	91.48	91.38	92.93

## New Securities

Application has been filed with the I.C.C. by:

**ERIE.**—To assume liability for \$5,400,000 of equipment trust certificates to finance in part acquisition of 25 diesel-electric locomotive units and 500 freight cars at an estimated total cost of \$6,915,000.

Description and Builder	Estimated Unit Cost
1 6,000-hp. 4-unit locomotive (Electro-Motive Division, General Motors Corporation) .....	\$660,000
4 1,600-hp. road-switchers (American Locomotive Company) .....	155,000
4 1,600-hp. road-switchers (Baldwin-Lima-Hamilton) .....	150,000
6 1,500-hp. road-switchers (Electro-Motive) .....	150,000
6 1,200-hp. switchers (Electro-Motive) .....	105,000
1 1,000-hp. switcher (American) ..	105,000
500 70-ton, mill-type gondola cars (Greenville Steel Car Company) ..	6,800

The certificates, dated December 1, would mature in 20 semiannual installments of \$270,000 each beginning June 1, 1952. They would be sold on competitive bids, with the interest rate to be fixed by such bids.

**NEW YORK CENTRAL.**—To assume liability for \$8,100,000 of equipment trust certificates, to finance in part 22 diesel-electric locomotives and 1,000 gondola cars. Estimated total cost of the equipment, listed below, is \$10,844,920.

Description and Builder	Estimated Unit Cost
10 1,600-hp. "A" unit road freight locomotives (Baldwin-Lima-Hamilton) .....	\$174,170
4 1,600-hp. "B" unit road freight locomotives (B-L-H) .....	156,845
6 2,400-hp. "A" unit road passenger locomotives (Fairbanks-Morse & Co.) .....	235,800
2 2,400-hp. "A" unit road passenger locomotives (Fairbanks-Morse) .....	236,520
1,000 70-ton high side gondola cars (Greenville Steel Car Company) ..	6,588

The certificates, to be dated December 1, would mature in 15 annual installments of \$540,000 each, beginning December 1, 1952. They would be sold by competitive bids, with the interest rate to be set by such bids.

## RAILWAY OFFICERS

### EXECUTIVE

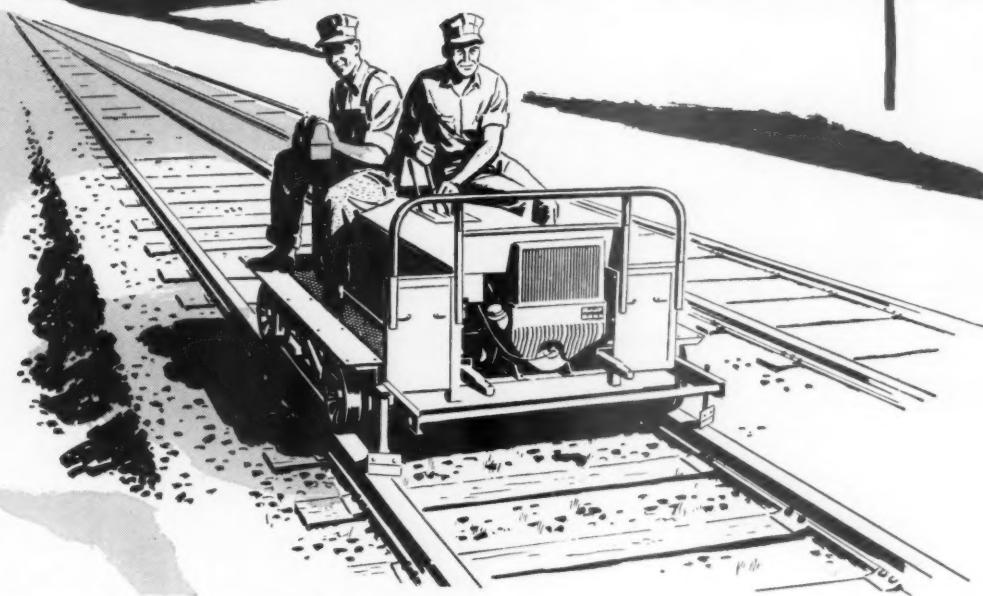
**C. A. Taylor**, vice-president and general manager of the Chesapeake district of the CHESAPEAKE & OHIO, has been appointed vice-president—operations of that district, with headquarters as before at Richmond, Va.

As reported in *Railway Age* October 1, **A. Y. Alcorn** has been appointed assistant to vice-president, system freight traffic, of the Southern Pacific at San Francisco. During 24 years of railroad service at locations in the Northwest, Mr. Alcorn has ad-  
(Continued on page 65)

# Fairmont

RAILWAY MOTOR CARS  
AND WORK EQUIPMENT

.....an  
invitation  
to  
America's  
Railroads



*This Fairmont S2 Series H Standard Section Car performs increased services in load and performance with increased efficiency and economy. Among its special features are an improved roller bearing engine, condenser cooling, and reinforced extension lift handles. Its sound, rugged construction increases life, reduces maintenance and provides greater safety.*

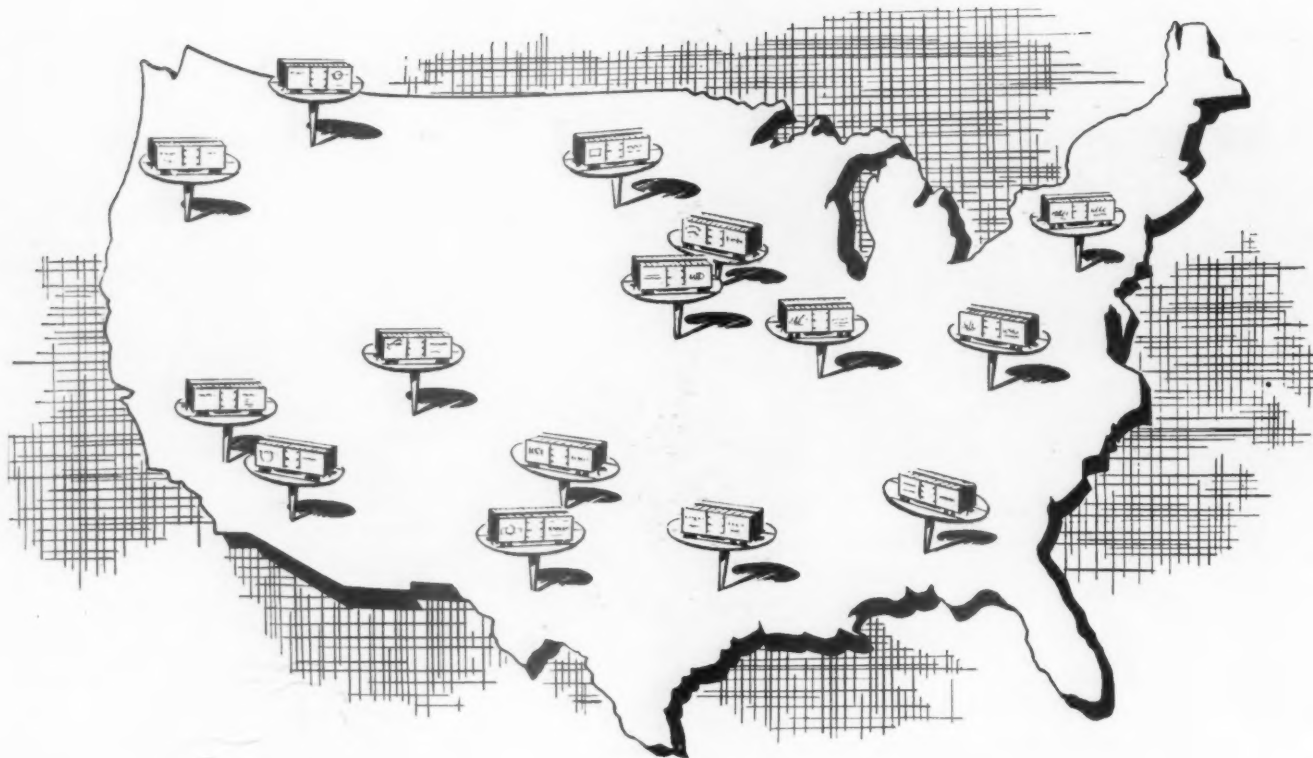
Today, as seldom before, it is important that planning be done with an eye to the future. For the ever-increasing defense production clearly indicates that the nation's railroads may once again be called on for peak-load operation. In rail maintenance, this means that the fastest, most efficient maintenance methods must be available. To assist in this effort, Fair-

mont places at your disposal every resource at its command—and cordially invites a call on its experience and creative energies both in general planning and in the solution of specific problems. Yes, it's only common sense to gear maintenance operations to the demands of the future. And the surest way to do that is to look to the leader in the maintenance field—Fairmont!

**Performance**  
ON THE JOB  
COUNTS

**FAIRMONT RAILWAY MOTORS, INC., FAIRMONT, MINNESOTA**





**AT ANY** *Location* ...**AT ANY** *Temperature* ...



**1 LOW CONDUCTIVITY.** Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.

**2 LIGHT WEIGHT.** Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

**3 PERMANENT.** Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

**4 EASY TO INSTALL.** Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

**5 COMPLETE RANGE.** STREAMLITE HAIRINSUL is available 1/2" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

**6 HIGH SALVAGE VALUE.** The all-hair content does not deteriorate with age; therefor has high salvage value. No other type of insulation offers a comparable saving.

## *Streamlite* **HAIRINSUL** **Protects Perishables!**

Streamlite Hairinsul is recognized by car building engineers to be the most efficient under all operating conditions. The successful use of all-hair Hairinsul for nearly half a century is proof that service conditions never impair its high insulating efficiency.

Major advantages of Streamlite Hairinsul are given at the left. Write for complete data.



Dept. H-111, Merchandise Mart, Chicago 54, Ill.

(Continued from page 62)

vanced through various traffic positions with the Canadian Pacific and the S. P. He was appointed assistant



A. Y. Alcorn

general freight agent of the latter at Portland, Ore., in 1945, and held that position until his recent promotion.

**Louis J. Hensley**, vice-president, comptroller and secretary of the KANSAS CITY SOUTHERN, has retired, effective October 1 (*Railway Age*, October 15). Mr. Hensley started his railroad career with the K. C. S. in 1903 as



Louis J. Hensley

assistant bill clerk. By 1913, he had become head of the road's accounting department as auditor. He was appointed comptroller in 1924, and in 1944 was elected vice-president and comptroller. He has been secretary since 1937.

**Vance H. Williams**, general traffic manager of the CHICAGO & ILLINOIS MIDLAND, has been elected vice-president in charge of traffic, a newly created position (*Railway Age*, October 15). Mr. Williams started as a clerk for the Canadian Government Railways (now part of the Canadian National) in 1915, leaving to serve in the armed forces in 1917. He became traveling freight agent for the Virginian in 1919, and traveling freight and pas-

senger agent for the El Paso & Southwestern (now part of the Southern Pacific) in 1920. He was named general agent of the line in 1923, and in 1925 was commercial agent for the Trans-Continental Freight Company. In



Vance H. Williams

1926, he started with the C.&I.M. as general agent, becoming traffic manager in 1929 and general traffic manager in 1940.

#### FINANCIAL, LEGAL & ACCOUNTING

**Walter M. Templeton**, assistant treasurer of the CHICAGO & EASTERN ILLINOIS, has been appointed secretary-treasurer to succeed **G. A. Burget**, who has retired after 46 years of service. **Kenneth Baxter**, assistant to the president, has been appointed assistant treasurer.

Mr. Templeton began his railroad career with the Great Northern in 1922 as secretary to the superintendent at Great Falls, Mont. In 1924 he became secretary to the assistant general manager of the Milwaukee at Butte, Mont. He was transferred to Chicago a year later, and in 1926 be-



Walter M. Templeton

came secretary to the president of the C. & E. I. In 1942, Mr. Templeton became assistant to the president and

in 1945 was named superintendent of the road with offices in Danville, Ill. He held that position until 1949 when he became assistant treasurer.

Mr. Burget, who has been an elected official of the C. & E. I. for 28 years, has been with the railroad since 1905 and rose to his present position from secretary to the chief clerk of the general manager. He started his railroad career with the Chicago, Terre Haute & Southeastern, where he worked for a year before coming to the C. & E. I. He has served as secretary to nine presidents of the road. In 1938, he was elected secretary-treasurer.

**Martin P. Burks** and **John P. Fishwick**, assistant general solicitors of the NORFOLK & WESTERN, have been appointed assistant general counsel, with headquarters as before at Roanoke, Va. They succeed **Stuart T. Saunders**, recently promoted to general counsel (*Railway Age*, October 15), and the late **D. Lynch Younger**. Mr. Burks received his legal training at Washington and Lee University. Following graduation in 1932 he practiced law in Roanoke until July 1942, when he entered the United States Navy. After more than four years of service, during which he advanced in rank from lieutenant, j.g., to lieutenant commander, he returned to the practice of law in Roanoke, and joined the N.&W. as assistant general solicitor in November 1947.

Mr. Fishwick received his A.B. degree from Roanoke College and his law degree from Harvard University. He practiced law in New York before serving for three years and seven months as a lieutenant in the United States Navy. Mr. Fishwick joined the N.&W. as assistant to the general solicitor in November 1945 and was promoted to assistant general solicitor in November 1947.

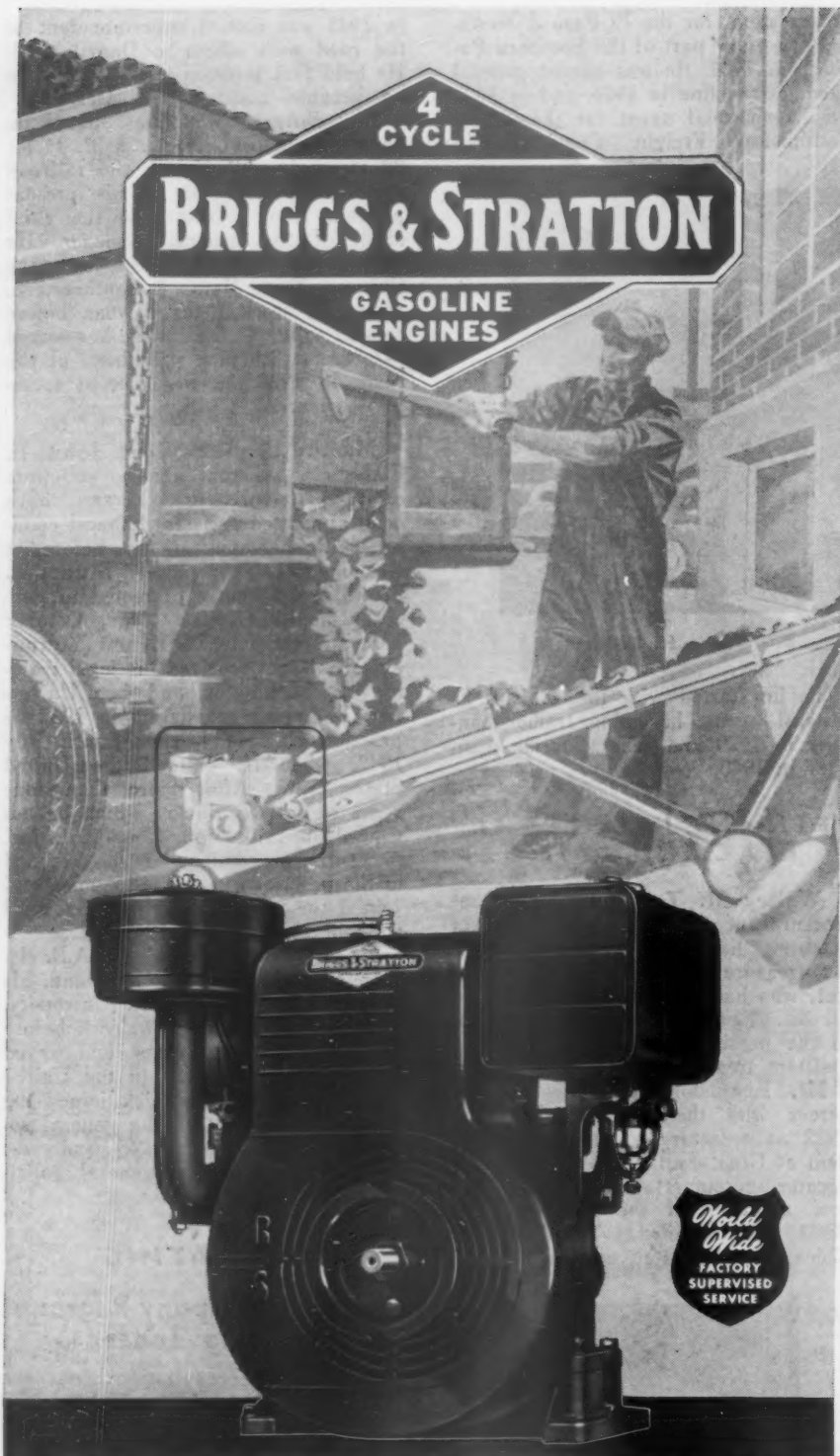
#### OPERATING

##### Pullman Company Regroups Its Operating Zones

Wide-spread organizational changes in the operating department of the Pullman Company became effective November 1. M. B. Osburn, vice-president in charge of the department, announced that the seven territorial zones were consolidated into five regions, that zone superintendents have become regional managers and that district superintendents have been appointed superintendents. Duties of both groups of officers have been expanded to give them added responsibilities and greater control over operations in their territories.

The new regions are the Northeastern, the Eastern-Southeastern, the Central, the Southwestern and the Western. The former Atlanta and Houston zones have been incorporated into the Eastern-Southeastern and the Southwestern zones, respectively. Mex-





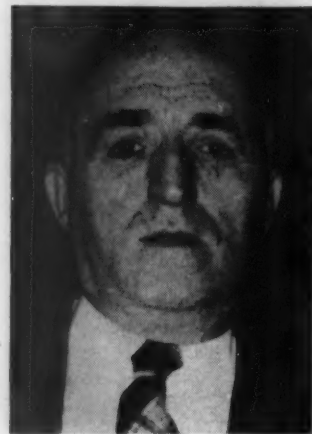
*Preferred power for portable conveyors, too — the world's most widely used single-cylinder 4-cycle, air-cooled gasoline engines on machines and tools for industry, construction, railroads, and on appliances and equipment for farm and home.*

**T**HERE is a Briggs & Stratton engine service organization, factory trained and supervised, near you — with a stock of genuine Briggs & Stratton parts for all models. The Briggs & Stratton service organization network is the largest of its kind in the world. Briggs & Stratton Corporation, Milwaukee 1, Wis., U. S. A.

In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

ican operations of the company have not been affected by the reorganization.

Mr. Osburn said the following had



John F. Carroll



Arthur H. Lobeck

been named regional managers to head the newly defined territories: Northeastern region — J. F. Carroll, former district superintendent, New



P. J. Scheid

York zone; Eastern-Southeastern region — A. H. Lobeck, former superintendent, Philadelphia zone; Central region — P. J. Scheid, former super-

# "Tailor-made" for Railroad Diesels



## Esso Diesel Lubricating Oil

**A HIGH-QUALITY LUBE FOR REAL PROTECTION**—Esso offers "tailor-made" diesel locomotive lubricating oil (Diol RD) developed through years of field testing and research by both engine designers and Esso scientists to meet needs of railroad diesels. High-quality Esso Diol RD gives dependable lubrication protection.

**BACKED BY CONSTANT RESEARCH**—continuing tests in the lab and on the road make sure that Diol RD keeps pace with progress and latest developments in railroad diesels.

**BACKED BY CONSTANT FOLLOW-UP**—on-the-job check-ups by Esso Sales Engineers watch the dependable performance of Esso Railroad Fuels and Lubricants. Be sure to call on Esso for any railroad fuel or lubricating problem.



### RAILROAD PRODUCTS

SOLD IN: Maine, N. H., Vt., Mass., R. I., Conn., N. Y., N. J., Pa., Del., Md., D. C., Va., W. Va., N. C., S. C., Tenn., Ark., La.

ESSO STANDARD OIL COMPANY—Boston, Mass.—New York, N. Y.—Elizabeth, N. J.—Philadelphia, Pa.—Baltimore, Md.—Richmond, Va.—Charleston, W. Va.—Charlotte, N. C.—Columbia, S. C.—Memphis, Tenn.—New Orleans, La.



## Libbey-ZONE Lifts Threat Of Huge Bridge Fire Loss

### 8 More Vital Bridges Treated After Railroad's Own Rigid Test

Convinced by its own rigid test, a major American railroad recently ordered that the new Libbey-ZONE Process be used to protect fire-susceptible decks of eight of its most vital mainline bridges.

The test structure itself was (and is) an important span—a 266-foot, double-track bridge in a large midwestern city. Previous to the Libbey-ZONE treatment, several small fires had been reported on the heavy-traffic structure (94 trains daily).

Fortunately there had never been serious fire damage to the structure. But the frequent small blazes required utmost vigilance continuously so the fires could be extinguished before they did real damage.

### Test Bridge Plagued by Fires

But always there was the foreboding that some day a blaze might not be seen in time. That the fire might spread and do enough damage to make the bridge impassable and inflict huge losses through traffic delay and re-routing.

The bridge was an ideal proving ground for the Libbey-ZONE Process, which is offered exclusively by THE ZONE COMPANY of Fort Worth, Texas.

The simple, economical process was applied to the bridge. First, application (by spray) of ZONE HEAVY-DUTY Bridge Coating (an asphalt compound) over exposed wood surfaces. Then, embedment of clean pea-sized gravel in the coating.

### Libbey-ZONE Coating Applied

Result: A tough, non-inflammable shield which keeps white-hot brake shoe splinters, sparks and other burning materials from contacting the wood members.

More than a year passed, and not a single blaze was reported on the bridge. The railroad's fire prevention engineer inspected the bridge 18 months after the Libbey-ZONE application—and found decks and ties still fully protected.

The engineer's report and recommendation prompted the company's engineering department to prescribe the Libbey-ZONE treatment for eight more important bridges. (If any of these bridges should become impassable, traffic detours would be long and costly—about 400 miles on the average).

### No Blazes on Protected Decks

Libbey-ZONE applications to these structures were made almost a year ago. And as this is written, no fires have been reported as starting on the protected bridge decks.

A score of railroads—having used the nine-year-old Libbey-ZONE Process on half a million lineal feet of bridge decks—have enjoyed similar freedom from fire. One protected bridge deck wasn't even harmed when a boiler exploded just above it.

Further information about the Libbey-ZONE process and experiences of its users will be readily supplied by THE ZONE COMPANY, Department RA, Box 789, Fort Worth 1, Texas.

(Advertisement)

intendent, Chicago zone; Western region — L. R. Armstrong, former superintendent, San Francisco zone;



L. R. Armstrong



Harry A. Hudwalker

Southwestern region — H. A. Hudwalker, former superintendent, St. Louis zone.

G. B. Aydelott, superintendent of the DENVER & RIO GRANDE WESTERN at Denver, has been appointed superintendent at Salt Lake City to succeed B. H. Decker. L. B. Coleman, superintendent of the Alamosa division, succeeds Mr. Aydelott, while R. B. Eagleston, assistant superintendent of the Alamosa division, succeeds Mr. Coleman. R. R. Hicks has been appointed assistant to general manager, with headquarters at Denver.

Herbert B. Tucker, superintendent of the Pennsylvania division of the NEW YORK CENTRAL at Jersey Shore, Pa., has been appointed superintendent of the New York Terminal district (including the marine department) and the River division at Weehawken, N. J. He succeeds Leroy Relyea, who has retired after 50 years of service with the N.Y.C. Charles B. Fleming, assistant superintendent of the Terminal district, with jurisdiction over the marine de-

partment, at New York, succeeds Mr. Tucker as superintendent of the Pennsylvania division at Jersey Shore. Andrew W. Dietrich, lighterage agent, succeeds Mr. Fleming as assistant superintendent of the Terminal district, with jurisdiction over the marine department. Mr. Relyea was born at Mt. Marion, N. Y., on April 20, 1884, and joined the N.Y.C. in 1901 as a telegrapher at Target Hill, N. Y. He spent his entire career on the River division, becoming trainmaster in 1918, assistant division superintendent at Weehawken in 1926, and superintendent of the Terminal district and River division in 1941.

J. W. Lovell, trainmaster for the Montgomery, New Orleans & Pensacola division of the LOUISVILLE & NASHVILLE, has been appointed trainmaster for the M. & N. O. sub-divisions, with headquarters as before at Mobile, Ala. E. C. Murray, assistant trainmaster on the Eastern Kentucky division, has been named trainmaster for the Pensacola sub-divisions at Pensacola, Fla.

E. C. Swantner has been appointed superintendent of the Northern division of the ST. LOUIS-SAN FRANCISCO at Neodesha, Kans.

Walter E. Sample, superintendent of fuel conservation of the BALTIMORE & OHIO at Baltimore, has retired after more than half a century of railroad service.

## MECHANICAL

C. R. Buskard, assistant works manager of the motive power shops of the CANADIAN NATIONAL at Montreal, has been appointed works manager of the Point St. Charles shops there.

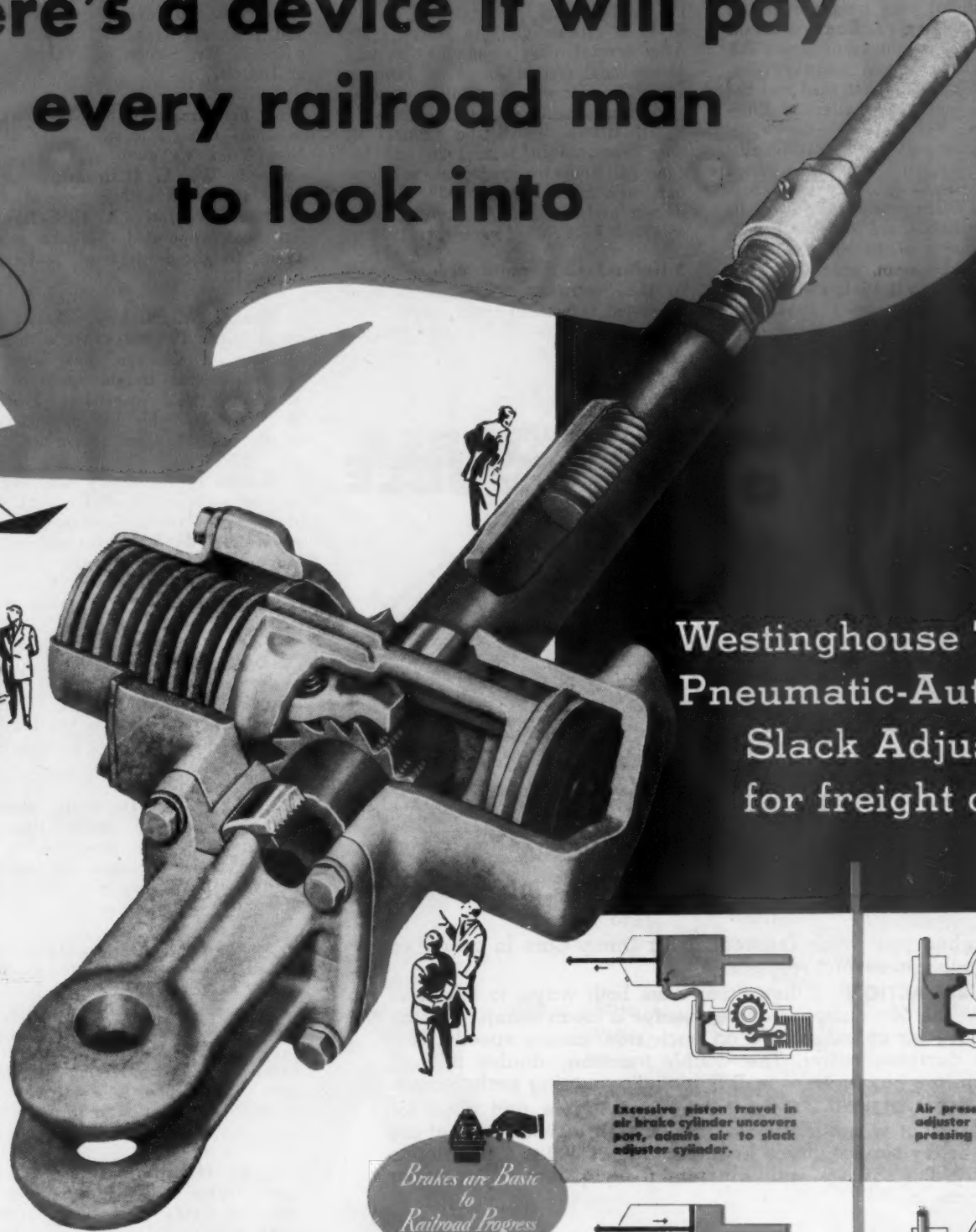
## TRAFFIC

K. M. Kerr, assistant to vice-president (traffic) of the ATLANTIC COAST LINE, has been appointed assistant vice-president, with headquarters as before at Wilmington, N. C. G. M. Mann, assistant general freight agent, has been appointed assistant to vice-president (traffic), with headquarters as before at Wilmington.

Joseph J. Snyder, general freight agent of the PITTSBURGH & LAKE ERIE, has been appointed assistant freight traffic manager of the NEW YORK CENTRAL and the P.&L.E. Robert E. Rogers, general coal freight agent of the N.Y.C. and P.&L.E., has been named general freight agent and manager industrial development of both roads. H. A. B. Brown, assistant general freight agent of the P.&L.E., has been promoted to general freight agent of that road and the N.Y.C. Paul J. Schweibinz, assistant to freight traffic manager and industrial agent of the two roads, has been ap-

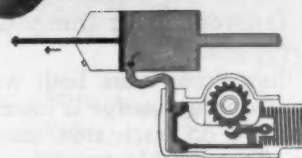
# Here's a device it will pay every railroad man to look into

## Westinghouse Type D Pneumatic-Automatic Slack Adjuster for freight cars

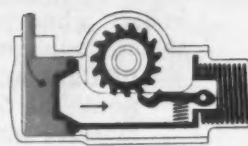


*Brakes are Basic  
to  
Railroad Progress*

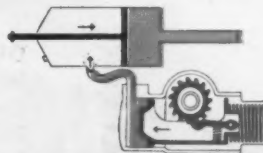
Check what manual adjustment of brake rigging costs. Add the cost of delayed departures from make-up yards . . . and you'll see why the Type D will pay for itself in a hurry, pay *you* from then on. Check the construction and operational view . . . and you'll see why the Type D does the job so well and so long without attention or maintenance.



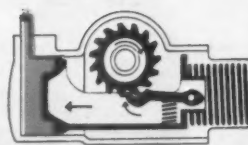
Excessive piston travel in air brake cylinder uncovers port, admits air to slack adjuster cylinder.



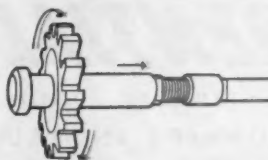
Air pressure moves slack adjuster piston back, compressing piston spring.



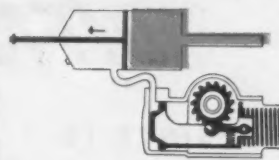
When brake is released, air in slack adjuster piston is vented. Piston spring returns slack adjuster piston.



Pawl on slack adjuster piston engages ratchet nut . . . advances it one notch.



Rotation of ratchet nut turns nut on tie rod, shortening the connection.



Process is repeated with each brake application until proper brake piston travel is established.

## XX Westinghouse Air Brake Co.

AIR BRAKE DIVISION  
WILMERDING, PA.



pointed general coal freight agent of both roads. **George J. Lunz**, assistant to the general freight agent of the P.&L.E., has been named assistant general freight agent of that road and the N.Y.C. All have headquarters at Pittsburgh.

Mr. Snyder was born at Connellsville, Pa., on April 1, 1898, and joined the P.&L.E. as a stenographer in September 1914. He rose through various clerical positions and on October 1, 1929, became coal freight agent. He was named assistant general freight agent on January 1, 1941, and general freight agent on January 1, 1944.

Mr. Rogers was born at Homestead,

Pa., and entered the service of the P.&L.E. as a ticket clerk in March 1920. After several other promotions he was named coal freight agent on January 1, 1941. He was appointed general coal freight agent on July 1, 1944.

Mr. Brown joined the Central at San Francisco in June 1926 and became division freight agent at Pittsburgh on September 1, 1939. He was named assistant general freight agent of the P.&L.E. on January 1, 1944.

**Roland C. Semon**, general agent of the SOUTHERN SYSTEM, has been promoted to general traffic agent, with headquarters as before at Detroit.

**Robert E. Spalding**, division freight and passenger agent at Louisville, Ky., succeeds Mr. Semon as general agent at Detroit.

**A. T. Borgman** has been named assistant foreign freight agent of the NEW YORK CENTRAL at Chicago. He succeeds **W. A. Hillman**, who has been appointed acting general agent at Davenport, Iowa. **A. C. Schaeffer** has been appointed assistant general agent, freight department, at East St. Louis, Ill.

**Marvel A. Nickey**, district coal agent of the PENNSYLVANIA with headquarters at Chicago, has been appointed district freight agent at Birmingham, Ala., succeeding **Howard M. Morton**, who has retired after more than 48 years of service.

**Martin L. Courtney** has been appointed assistant general freight agent of the WABASH at Kansas City, Mo., succeeding **W. E. Alderson**, retired. **Harry W. Christman**, traveling freight agent at Denver, Colo., has been appointed general agent at the same point, succeeding Mr. Courtney.

**H. B. Lewis** has been appointed western coal traffic manager of the NEW YORK, CHICAGO & ST. LOUIS, at Chicago. **L. K. Rhoads** has been appointed general agent at Omaha, Neb., succeeding Mr. Lewis.

**Frank G. McDermott**, commercial agent of the ELCIN, JOLIET & EASTERN, has been promoted to general agent at Chicago. He succeeds **Henry B. Banks**, who has retired after 40 years of service.

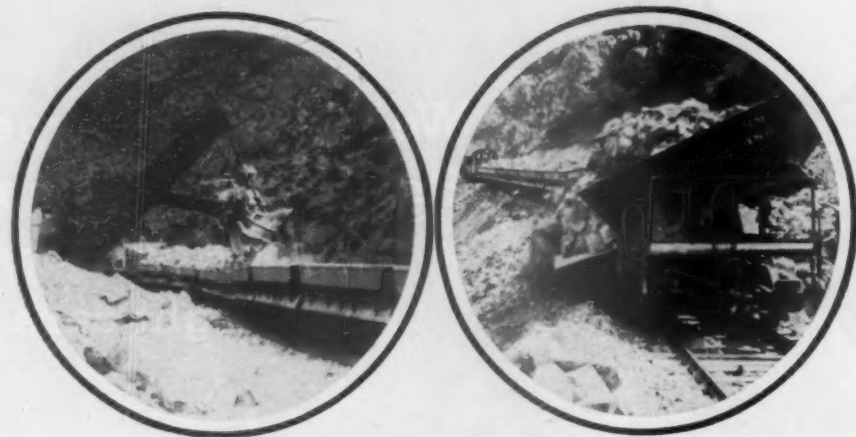
**Byron L. Vaughan**, traffic representative for the ST. LOUIS-SAN FRANCISCO at Los Angeles, has been appointed general agent at Seattle, succeeding **William H. Brewer**, who has retired after 50 years of service. **James M. Crites**, traffic representative at Fort Worth, Tex., has been promoted to general agent at the same point.

**L. H. Hammond**, general freight agent, rates and divisions, for the MIDLAND VALLEY, has been appointed traffic manager, rates and divisions, with headquarters as before at Muskogee, Okla. **L. N. Childers** has been appointed assistant traffic manager, sales.

**Robert T. White**, traveling freight agent for the MILWAUKEE, has been appointed division freight agent at Chicago. He succeeds **Joseph F. Lahey**, who has retired after 39 years of service.

**Carl H. Groninger**, whose appointment as freight traffic manager of the BALTIMORE & OHIO, at Chicago, was announced in *Railway Age* October 15, started his career with the

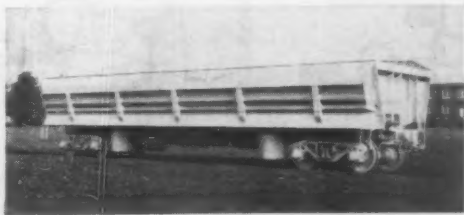
## Y es, you're seeing **DOUBLE**



In fact, when you watch Differential Air Dump Cars in action you're seeing double in several respects —

**DOUBLE ACTION** — they dump cars both ways, to left or to right. The 50° dumping angle assures a clean dump, and the massive air cylinders (two on each side) assure speedy, reliable dumping power. The double trunnion, double fulcrum design are key features in Differential's amazing performance.

**DOUBLE UTILITY** — Good for hauling in ore and good for hauling out waste materials. Car is built to withstand abuse and heavy service. If you haul as many as 400 to 500 carloads yearly, the savings with Differential equipment will pay for the cars.

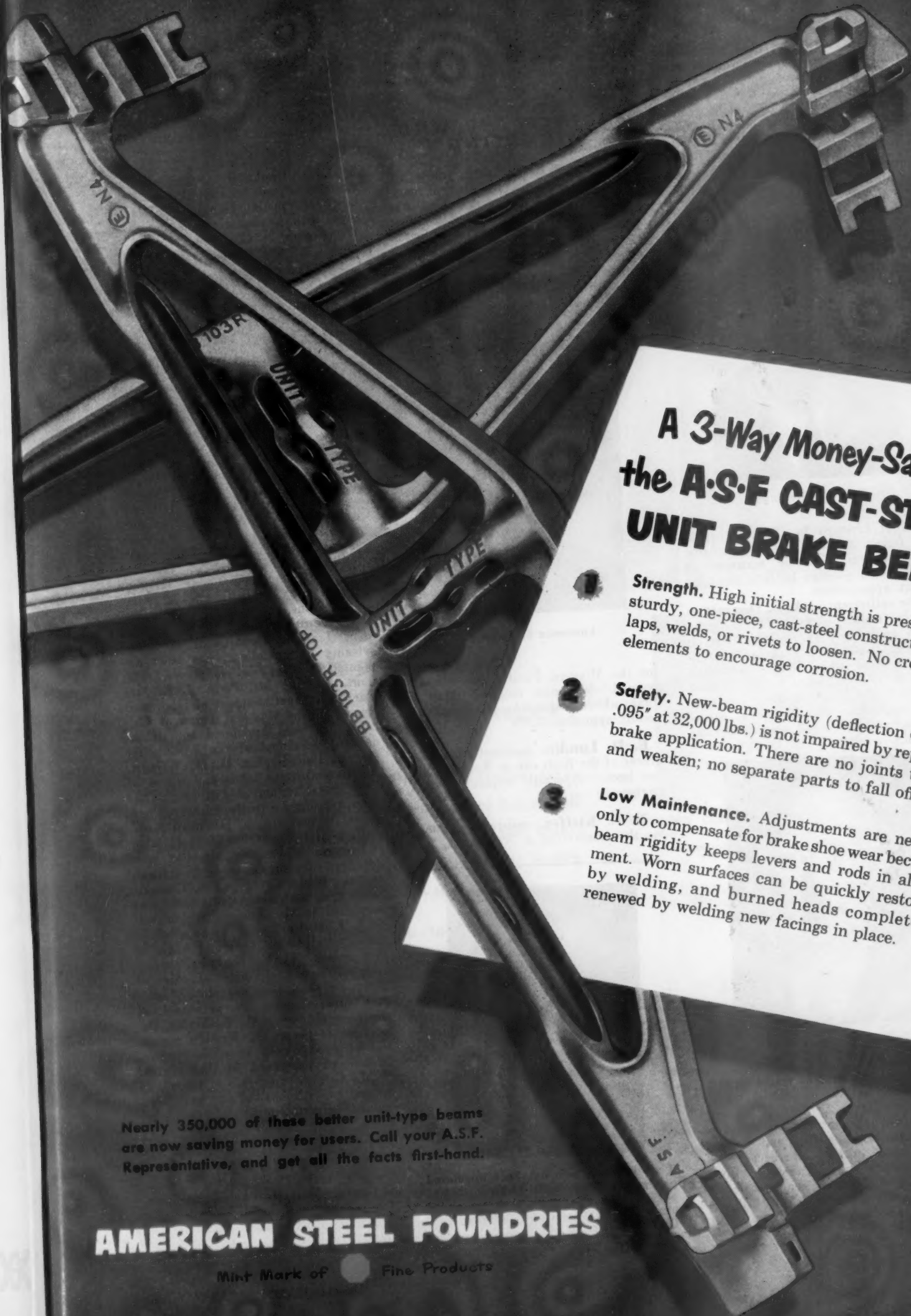


Differential Products Include: Air Dump Cars, Locomotives, Mine Cars, Mine Supply Cars, Rock Larries, Mantrip Cars, Dumping Devices and Complete Haulage Systems

# DIFFERENTIAL STEEL CAR COMPANY

FINDLAY, OHIO

SINCE 1915 — PIONEERS IN HAULAGE EQUIPMENT



## A 3-Way Money-Saver the A.S.F. CAST-STEEL UNIT BRAKE BEAM

**1 Strength.** High initial strength is preserved by sturdy, one-piece, cast-steel construction. No laps, welds, or rivets to loosen. No crevices or elements to encourage corrosion.

**2 Safety.** New-beam rigidity (deflection of only .095" at 32,000 lbs.) is not impaired by repeated brake application. There are no joints to flex and weaken; no separate parts to fall off.

**3 Low Maintenance.** Adjustments are needed only to compensate for brake shoe wear because beam rigidity keeps levers and rods in alignment. Worn surfaces can be quickly restored by welding, and burned heads completely renewed by welding new facings in place.

Nearly 350,000 of these better unit-type beams are now saving money for users. Call your A.S.F. Representative, and get all the facts first-hand.

# AMERICAN STEEL FOUNDRIES

Mint Mark of  Fine Products



B. & O. in 1918, and held numerous clerical and stenographic positions until 1923, when he was appointed traveling freight agent at Akron, Ohio. In 1928 he became division freight agent at Huntington, W. Va., and was transferred, successively, to Parkersburg, W. Va., Rochester, N. Y., and Baltimore as division freight agent. He was appointed assistant general freight



Carl H. Groninger

agent at Chicago in 1945, and general freight agent in 1947. He became assistant freight traffic manager in 1951, which position he held until his recent appointment.

The retirement of **A. L. Doggett** as freight traffic manager at Chicago (also announced by *Railway Age* on October 15), closes a career of railroad service which began with the B. & O. in 1898, when he was a messenger in the freight traffic department at Cincinnati. Mr. Doggett's subsequent career included several clerical



A. L. Doggett

positions in the freight traffic department, until he was appointed traveling freight agent in 1907. This was followed by appointment as commercial freight agent in 1917 and division freight agent in 1919. He became assistant general freight agent at Pittsburgh in 1921 and general freight agent at the same point in 1928. He was appointed freight traffic manager

at Pittsburgh in 1933 and transferred to Chicago with the same position in 1933.

## ENGINEERING AND SIGNALING

**Lawrence E. Verbarg**, whose appointment as superintendent of communications, **MISSOURI PACIFIC**, was announced by *Railway Age* October 29, was graduated from Washington University in 1942 with a degree in electrical engineering. Mr. Verbarg subsequently worked as an engineer for the General Electric Company and in 1945 he became telephone engineer



Lawrence E. Verbarg

for the Missouri Pacific. He was appointed electronics engineer May 1, 1951, which position he held until his recent appointment.

**E. H. Lundin**, assistant chief engineer of the **RUTLAND** at Rutland, Vt., has been temporarily appointed chief engineer.

**N. C. Kieffer**, assistant engineer for the **LOUISVILLE & NASHVILLE**, has



**R. A. Hendrie**, who has been appointed general superintendent communications of the Missouri Pacific. A sketch of his career appeared in *Railway Age*, October 29, page 60

been appointed assistant engineer in the chief engineer's miscellaneous department at Louisville, Ky. **C. W. Hale** succeeds Mr. Kieffer as assistant engineer on the Louisville division.

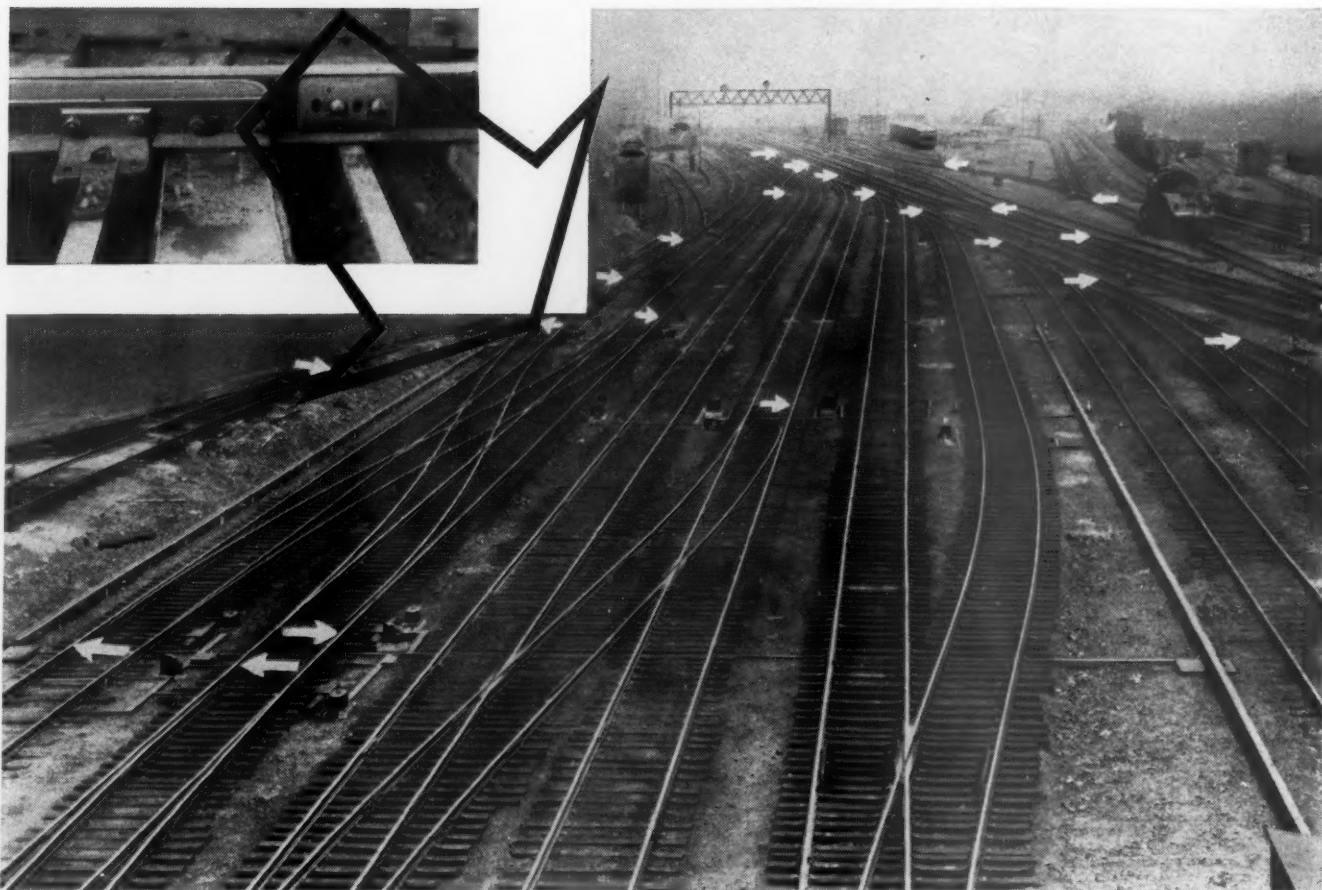
**D. B. Packard**, special assistant engineer of the **ATLANTIC COAST LINE**, has been appointed engineer of buildings, with headquarters as before at Wilmington, N. C.

## SPECIAL

A broad reorganization of the personnel department of the **PENNSYLVANIA** to expand and intensify employee relations activities and to bring about a better understanding of mutual interests and concerns among the men, their supervisors and officers of the company, has been announced by the president. The new work will be carried on under general supervision of **J. W. Oram**, chief of personnel. **J. I. Patbin**, assistant chief of personnel, will carry forward the enlarged employee relations program. **Charles E. Alexander**, superintendent of labor and wages of the Eastern region at Philadelphia, has been appointed assistant chief of personnel to handle matters involving relationships between management and labor organizations representing employees. **J. E. Kennedy**, head of the Management Training Department of Pennsylvania State College, has been appointed manager of employee relations, assisting Mr. Patin. **J. E. McFarland**, superintendent of labor and wages of the Western region at Chicago, has been appointed superintendent of personnel of the Eastern region at Philadelphia. **B. O. Wilson**, superintendent of labor and wages of the Central region at Pittsburgh, has been appointed superintendent of personnel in that region. **Herman Kendall**, assistant superintendent of labor and wages at Philadelphia, has been advanced to superintendent of personnel, Western region at Chicago. Serving as assistant superintendent of personnel in the Eastern region will be **J. J. Maher**, now in the office of the superintendent labor and wages of that region. **T. V. Murphy**, supervisor of personnel, office of chief of personnel, has been appointed assistant superintendent of personnel of the Central region. **A. E. Myles**, supervisor of personnel, Western region, has been appointed assistant superintendent of personnel, of that region. **W. L. Goetz**, supervisor of labor and wages at Altoona, Pa., has been named superintendent of personnel there.

## OBITUARY

**Gustav Van Hemert Schneider**, (retired) civil engineer with the **SOUTHERN PACIFIC**, died on September 13 in San Francisco.



## Makes switch rails last 8 to 10 times longer!

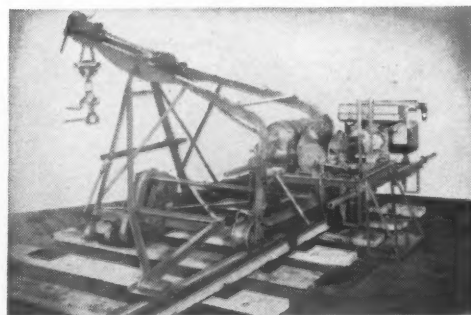
The Mack Reversible Switch Point Protector takes the load and grinding wear of passing wheel flanges off of Switch Points—by deflecting the wheel and transferring flange contact to the thicker part of the switch rail, thus increasing switch rail life 4 to 5 times.

Then the Mack Switch Point Protector is removed, reversed and *reapplied*—after which it prolongs the Switch Rail life another 4 to 5 times—making the total switch rail life 8 to 10 times that of an unprotected switch rail!

The cost of new Switch Rails, and the labor cost of removing and replacing worn ones are reduced to 1/8 or 1/10.



MECO CURVE-RAIL LUBRICATOR greatly decreases wheel-flange friction, prolongs high-rail life 2 to 4 times, increases safety of train operation.



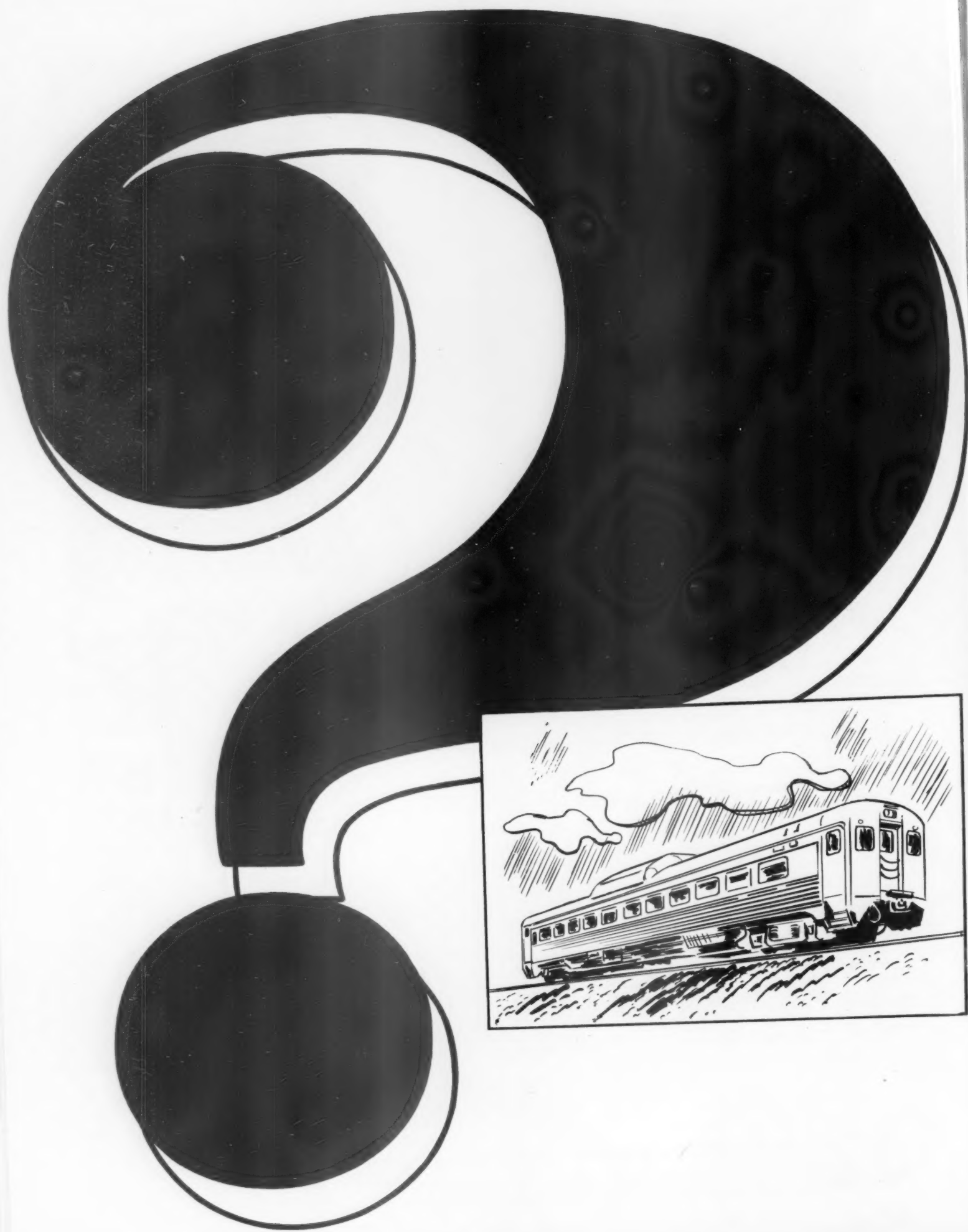
MECO POWER RAIL LAYER takes the place of a big gang of men, cuts rail laying costs tremendously. Lays single rails or continuous-weld rails several hundred feet long.

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★ **Maintenance Equipment Company** ★

RAILWAY EXCHANGE BUILDING • CHICAGO 4, ILLINOIS





# Why Don't They.....?

● With all the technological advances of the past decade at hand, plus the war-proved ruggedness and capability of relatively small diesel power units, that goading question "Why don't they?", which haunts the entire organization of The Budd Company, focused on the subject of self-propelled railway cars.

The result is Budd's RDC, now operating in a practically unlimited variety of services on seven domestic railroads and in two foreign countries, just two years since its introduction.

The following quotation from a recent issue of *Railway Age* gives one example of what RDC is doing:

"The New York Central on August 26 took the first step toward complete dieselization of local passenger service on its main line east of Buffalo. On that date two Budd-built rail diesel cars went into operation between Harmon, N. Y., and Peekskill.

"The RDC's replaced eight northbound and 10 southbound trains, and several coal-fired steam locomotives which pulled local suburban trains beyond Harmon have been retired.

"On September 30, the Central also reports, a rail diesel car will go into service on its Buffalo Division between Buffalo Central Terminal, Niagara Falls and Suspension Bridge, N. Y. The 'Beeliner' will replace most local trains now pulled by steam locomotives and will make two extra runs daily from Buffalo to Niagara Falls. Four round trips will be made each day on the approximately 50-mile round-trip run.

"Present schedules will be shortened by as much as 33 minutes on a one-way trip. Making all stops in the present timetable, the 'Beeliner' will maintain a 50-minute schedule between Buffalo Central Terminal and Niagara Falls."

One of the principal ingredients in everything Budd makes is imagination. The Budd Company, Philadelphia 32.



**B U D D**  
**Budd**

**PIONEERS IN BETTER TRANSPORTATION**





Take a Hint from  
Diesel Locomotive  
Builders

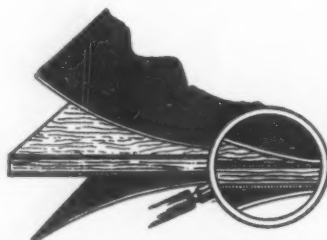
## ON METAL BONDED TO PLYWOOD MET-L-WOOD USES

**MAJOR** manufacturers of diesel locomotives use Met-L-Wood doors and exterior side panels for the same reasons, listed at right, that make Met-L-Wood the ideal construction material for many additional railroad uses. Interior panels, bulkheads, heading, wainscoting, doors, luggage shelves, cabinets, table tops, baggage-car messenger accommodation units...All gain beauty, strength and utility when they are made lighter with Met-L-Wood.

Met-L-Wood versatility extends to the materials from which it is made. A large variety of woods, metals, thicknesses and finishes are available in stock sizes and units; or prefabricated to most exacting specifications. Write for 12-page Bulletin, describing Met-L-Wood possibilities fully.

### These are the Advantages of MET-L-WOOD for Railroad Uses

- **WEIGHT SAVINGS** with Met-L-Wood are as high as 73% over steel construction of equal strength!
- **STIFFNESS** of Met-L-Wood Type 2P2-3/4" thickness is the same as that of solid steel plate 1/4" thick!
- **INSULATION** and **SOUND-DEADENING** qualities of Met-L-Wood cut costs and deadweight still further by making less insulation material necessary.
- **INHERENT BEAUTY** of Met-L-Wood's smooth, tough surfaces adds aesthetic value to rugged durability.
- **FAST ASSEMBLY** of prefabricated Met-L-Wood doors and panels cuts manufacturing costs without sacrificing quality. Standard Met-L-Wood sections can be formed, sawed, tapped, drilled, brazed or soldered without special tools or skills.



**MET-L-WOOD CORPORATION**

6755 West 65th Street, Chicago 38, Illinois

**MET-L-WOOD • STRONG...LIGHT...Smooth Finish...Sound Deadening...Fire-Resisting...Insulating**

# OPERATING REVENUES AND OPERATING EXPENSES OF CLASS I STEAM RAILWAYS

Compiled from 127 monthly reports of revenues and expenses representing 131 Class I steam railways

(Switching and Terminal Companies Not Included)

## FOR THE MONTH OF AUGUST 1951 AND 1950

Item	United States		Eastern District		Southern District		Western District	
	1951	1950	1951	1950	1951	1950	1951	1950
Miles of road operated at close of month	225,891	226,365	53,257	53,346	45,944	46,089	126,690	126,930
Revenues:								
Freight	\$758,759,118	\$748,109,566	\$274,541,726	\$271,477,863	\$155,359,024	\$145,855,236	\$328,858,368	\$330,776,467
Passenger	83,830,095	78,220,014	41,592,270	38,548,777	12,378,978	11,193,424	29,858,847	28,477,813
Mail	20,111,465	18,038,671	8,178,918	6,706,953	3,108,542	2,938,039	8,824,005	8,393,679
Express	7,349,149	8,842,600	2,608,438	3,159,137	1,100,418	1,234,788	3,640,293	4,448,675
All other operating revenues	39,894,780	36,585,234	17,867,553	15,741,178	6,509,696	5,620,888	15,517,531	15,223,168
Railway operating revenues	909,944,607	889,796,085	344,788,905	335,633,908	178,456,658	166,842,375	386,699,044	387,319,802
Expenses:								
Maintenance of way and structures	134,693,420	121,972,418	48,598,218	44,412,537	26,512,493	24,489,700	59,582,709	53,070,181
Depreciation	11,256,919	10,992,145	4,626,211	4,592,535	2,115,711	2,022,845	4,514,997	4,376,765
Retirements	1,475,597	1,734,021	462,656	596,311	335,671	302,262	677,270	835,448
Deferred maintenance	*144,375	*119,065	*110,473	.....	*33,902	*60,352	.....	*58,713
Amortization of defense projects	109,749	152,444	81,575	15,808	35,153	46,550	*6,979	90,086
Equalization	*3,100,409	*1,693,198	*2,586,697	*1,486,923	*428,583	101,561	*85,129	*307,836
All other	125,095,939	110,906,071	46,124,946	40,694,806	24,488,443	22,076,834	54,482,550	48,134,431
Maintenance of equipment	169,583,651	151,000,844	69,412,187	65,332,464	34,546,862	28,386,174	65,624,602	57,282,206
Depreciation	26,807,604	25,196,195	9,911,366	9,426,240	5,796,370	5,603,414	11,099,868	10,166,541
Retirements	*96,531	*28,461	*26,319	*3,863	*21,745	*16,703	*48,467	*7,895
Deferred maintenance and major repairs	*783,084	*160,161	*781,187	*87,542	*1,897	*10,461	.....	*62,158
Amortization of defense projects	4,126,545	1,223,413	2,406,273	451,425	1,531,571	240,224	188,701	531,764
Equalization	457,871	778,429	*34,714	1,005,597	*166,178	*103,861	658,763	*123,307
All other	139,071,246	123,991,429	57,936,768	54,540,607	27,408,741	22,673,561	53,725,737	46,777,261
Traffic	17,577,968	16,079,147	5,872,418	5,560,144	3,789,148	3,341,588	7,916,408	7,177,415
Transportation—Rail line	342,267,939	303,990,709	141,675,899	127,172,445	59,357,671	53,279,072	141,234,369	123,539,192
Miscellaneous operations	10,991,981	10,069,949	3,609,471	3,200,613	1,587,251	1,354,633	5,795,259	5,514,703
General	25,536,404	23,151,798	9,606,159	9,159,098	5,534,236	4,951,697	10,396,009	9,040,903
Railway operating expenses	700,651,363	626,264,865	278,774,352	254,837,401	131,327,661	115,802,864	290,549,350	255,624,600
Net revenue from railway operations	209,293,244	263,531,220	66,014,553	80,796,507	47,128,997	51,039,511	96,149,694	131,695,202
Railway tax accruals	110,726,003	126,197,664	33,183,933	36,666,262	28,375,276	29,822,547	49,166,794	59,708,855
Pay-roll taxes	24,985,551	23,421,736	10,014,729	9,637,953	4,755,184	4,356,771	10,215,638	9,427,012
Federal income taxes†	55,911,399	73,936,424	12,535,773	17,201,682	17,230,640	19,138,446	26,144,986	37,596,296
All other taxes	29,829,053	28,839,504	10,633,431	9,826,627	6,389,452	6,327,330	12,806,170	12,685,547
Railway operating income	98,567,241	137,333,556	32,830,620	44,130,245	18,753,721	21,216,964	46,982,900	71,986,347
Equipment rents—Dr. balance	13,760,457	11,407,428	6,481,380	6,479,071	*1,477,604	*3,302,075	8,756,681	8,230,432
Joint facility rent—Dr. balance	3,925,308	3,582,948	1,983,417	1,754,747	593,222	531,637	1,348,669	1,296,564
Net railway operating income	80,881,476	122,343,180	24,365,823	35,896,427	19,638,103	23,987,402	36,877,550	62,459,351
Ratio of expenses to revenues (percent)	77.0	70.4	80.9	75.9	73.6	69.4	75.1	66.0

## FOR THE EIGHT MONTHS ENDED WITH AUGUST 1951 AND 1950

Item	United States		Eastern District		Southern District		Western District	
	1951	1950	1951	1950	1951	1950	1951	1950
Miles of road operated at close of month	225,957	226,500	53,284	53,357	45,954	46,120	126,719	127,023
Revenues:								
Freight	\$5,668,992,858	\$4,923,460,513	\$2,093,444,729	\$1,838,422,171	\$1,191,785,672	\$1,017,021,643	\$2,383,762,457	\$2,068,016,699
Passenger	595,055,826	530,367,811	300,263,017	280,135,001	95,315,194	80,858,776	199,477,615	169,374,034
Mail	158,572,702	142,011,689	61,995,804	51,948,210	25,998,150	24,843,042	70,578,748	65,220,437
Express	50,689,516	47,740,374	16,350,414	13,993,437	8,628,630	8,284,514	25,710,473	25,462,423
All other operating revenues	289,321,863	242,083,730	130,230,244	106,593,890	50,049,841	40,566,791	109,041,778	94,923,049
Railway operating revenues	6,762,632,765	5,885,664,117	2,602,284,207	2,291,092,709	1,371,777,487	1,171,574,766	2,788,571,071	2,422,996,642
Expenses:								
Maintenance of way and structures	991,588,707	838,930,416	349,896,755	293,146,791	210,269,431	178,249,084	431,422,521	367,534,541
Depreciation	89,241,395	86,813,097	36,848,233	36,306,431	16,565,167	15,681,761	35,827,995	34,824,905
Retirements	10,339,981	9,186,233	4,250,770	2,997,247	1,537,614	1,745,480	4,551,497	4,443,506
Deferred maintenance	*1,405,103	*1,394,617	*1,314,778	*800,000	*90,326	*258,908	1	*335,109
Amortization of defense projects	1,082,003	1,203,671	177,736	141,116	286,427	355,617	617,840	706,938
Equalization	4,832,895	2,092,689	*1,706,990	*1,037,852	6,023,245	5,070,362	516,640	*1,939,821
All other	887,497,536	741,028,743	311,641,684	255,539,849	185,947,304	155,654,772	389,908,548	329,834,122
Maintenance of equipment	1,316,740,956	1,094,771,669	544,998,790	457,921,023	263,621,933	213,526,585	508,120,233	423,324,061
Depreciation	206,335,925	196,035,599	75,109,096	72,848,833	46,231,313	43,971,751	84,995,516	79,215,015
Retirements	*1,679,215	*357,800	*909,411	*62,293	*432,676	*171,395	*337,128	*124,112
Deferred maintenance and major repairs	*12,023,685	*9,102,920	*11,880,285	*8,590,945	*16,284	*102,949	*127,116	*409,026
Amortization of defense projects	28,782,966	9,763,800	12,256,449	3,611,827	6,938,478	1,896,331	9,588,039	4,255,642
Equalization	768,936	3,229,434	64,040	2,846,625	860,635	349,578	*155,739	33,331
All other	1,094,556,029	895,203,556	470,358,901	387,266,976	210,040,467	167,583,269	414,156,661	340,353,311
Traffic	140,643,233	127,274,753	46,868,125	43,264,503	29,773,239	26,595,033	64,001,869	57,415,217
Transportation—Rail line	2,625,345,384	2,246,228,129	1,104,675,093	952,979,657	474,235,326	408,560,785	1,046,434,965	884,687,687
Miscellaneous operations	82,898,712	72,629,395	28,572,415	25,709,399	12,921,579	10,970,021	41,404,718	35,949,975
General	202,564,374	179,688,609	77,162,825	69,873,821	43,266,857	38,401,486	82,134,692	71,413,302
Railway operating expenses	5,359,781,366	4,559,522,971	2,152,174,003	1,842,895,194	1,034,088,365	876,302,994	2,173,518,998	1,840,324,783
Net revenue from railway operations	1,402,851,399	1,326,141,146	450,110,204	448,197,515	337,689,122	295,271,772	615,052,073	582,671,859
Railway tax accruals	752,009,833	651,181,004	228,931,147	209,877,667	189,375,056	155,571,729	333,703,630	285,731,608
Pay-roll taxes	191,584,758	170,556,258	78,220,525	69,975,074	36,742,735	32,342,653	76,621,498	68,238,531
Federal income taxes†	326,588,823	262,023,216	67,233,512	62,056,560	102,780,150	76,111,980	156,575,161	123,854,676
All other taxes	233,836,252	218,601,530	83,477,110	77,846,033	49,852,171	47,117,096	100,506,971	93,638,401
Railway operating income	650,841,566	674,960,142	221,179,057	238,319,848	148,314,066	139,700,043	281,348,443	296,940,251
Equipment rents—Dr. balance	108,023,794	92,177,965	47,280,671	44,410,098	*1,999,819	*9,251,505	62,742,942	57,019,372
Joint facility rent—Dr. balance	29,181,639	26,245,047	14,248,029	12,402,088	4,040,820	4,052,883	10,892,790	9,790,076
Net railway operating income	513,636,133	556,537,130	159,650,357	181,507,662	146,273,065	144,898,665	207,712,711	230,130,803
Ratio of expenses to revenues (percent)	79.3	77.5	82.7	80.4	75.4	74.8	77.9	76.0

†Includes income tax, surtax, and excess profits tax.

\*Decrease, deficit, or other reverse item.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.





## Take a look at **Strand**

and you'll see why it's  
the finest flexible-shaft  
equipment made today

This particular machine is the new 4-speed Strandflex. No belts are used—a patented gear-drive assembly mounted on the motor permits quick, easy, positive speed change. Entire motor-drive unit, including even the starting switch, is completely enclosed to seal out dirt, dust and grit—and give you many extra years of trouble-free service.

The STRAND line of flexible-shaft tools—manufactured by the N. A. Strand Division of the Balmar Corporation, a wholly-owned Franklin subsidiary—includes, also, belt machines up to 3 hp. It provides a selection of portable, easily controlled, light-working-weight tools which can be used in tight places, on the bench or floor, for—grinding—polishing—buffing—wire brushing—rotary filing—sanding—nut setting—screw driving.

Each of our offices has STRAND equipment available for demonstration at any time you suggest. If this is not practical, won't you write for one or more of the following:

- Catalogue #31—Single-speed and three-speed countershaft types— $\frac{1}{2}$  to 3 hp
- Bulletin #43—Four-speed "Strandflex" gear type— $\frac{1}{4}$  to  $\frac{1}{2}$  hp
- Bulletin #47—Rotary files and cutters
- Bulletin #48—Wire brushes
- Bulletin #49—Abrasive and grinding attachments
- Bulletin #50—Buffing and rubbing attachments



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STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER  
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## Current Publications

### PAMPHLETS

*Joint Equipment Committee [Report on] Costs of Railroad Equipment and Machinery, July 1, 1951. 24 pages. Association of American Railroads, Finance, Accounting, Taxation & Valuation Department, Transportation bldg., Washington 6, D. C. Free.*

Brings up to date (through 1950) the report on historical costs of locomotives, freight cars and passenger cars, and average relationship of costs on various types of equipment and machinery.

*Chief Factors Underlying General Changes in Rail Freight Rates, with Special Reference to Farm Products, 1910-51, by Ezekiel Limmer. 58 pages. Bureau of Agricultural Economics, U. S. Department of Agriculture, Washington 25, D. C. Free.*

Mr. Limmer lists the principal railroad freight rate-level decisions of the Interstate Commerce Commission, indicating the request made and decision rendered, 1910-51. A brief discussion of the cases follows. He then discusses standards which guide the commission, and its application of the standards.

*Transportation of Selected Agricultural Commodities to Leading Markets by Rail and Motor Truck, 1939-50, by Ezekiel Limmer. 42 pages. Bureau of Agricultural Economics, U. S. Department of Agriculture, Washington 25, D. C. Free.*

This study shows that motor trucks predominate in the hauling of poultry and its products, and milk, and most types of livestock, to leading markets. Almost all of the receipts of live poultry at principal markets in 1950 arrived by truck; only one per cent came by rail. For shell eggs, milk, hogs, cattle and calves, and dressed poultry, the proportion hauled by truck was more than 70 per cent. At the other extreme are cheese and oranges; truck receipts for these products accounted for only one-third of the total in 1950, whereas railroads handled two-thirds. Tables give detailed statistics. The principal findings are that the proportion by motor truck rose before World War II; during the war, the rail proportion increased; toward the war's end, the truck proportion rose again. Comparisons of rail and truck proportion by commodity and market—1950; comparisons between 1950 and previous peaks in proportion by truck; and changes in volume hauled by rail and truck, 1939-50, are included.

*Applications of Electricity to Railways, 1950. Prepared by Edmund A. Freeman. 43 pages. Library, Bureau of Railway Economics, Association of American Railroads, Transportation bldg., Washington 6, D. C. Free.*

A bibliography of articles on railroad electrification, diesel-electric and electric locomotives, and electrical apparatus and equipment appearing in a select list of periodicals. Bibliographies on communications and signaling appear in an appendix.

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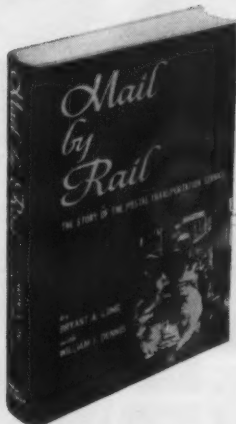
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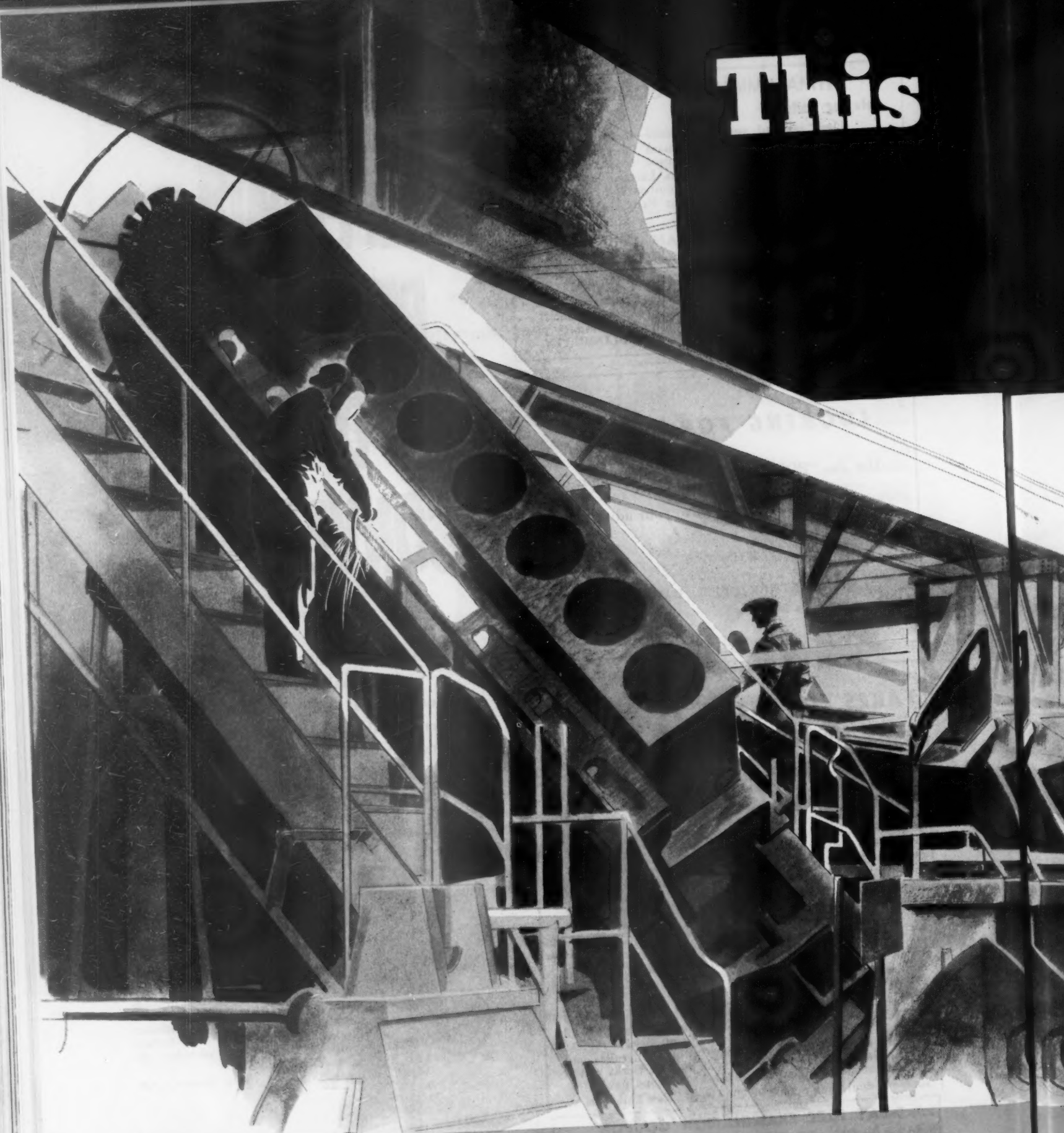
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